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**C H A N G E A N D
S E C O N D A R Y S C H O O L
A D M I N I S T R A T I O N**

A Book of Readings

**The Macmillan Company, New York
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*'To my many teachers for their wisdom and spirit of inquiry
To my current and former administrators for example and tolerance
To my colleagues for their kindred, innovative spirits
And to the students—whom we all serve*

Preface

I believe that we are living in the most exciting and challenging period of time in the whole history of the world. It is a revolutionary period of history, where new ideas are so prevalent that by the time a practice is tested and proved, it is obsolete. We double the total amount of discovered knowledge every few years. We walk in space. We leave for a destination on a high-speed jet and frequently arrive before our departing time.

The challenge of this revolutionary period extends into all aspects of life. Education can no more remain complacent to the needs that such a challenge presents than the seed can resist the effect of the sun and rain at springtime. Our educational theory, structure, program, and practices must change. The rapidity and degree to which this change will occur are dependent upon the school administrators and teachers—the leaders of the schools. This book is written for the administrators and teachers who desire to bring today's challenging new ideas and practices to the everyday working level.

Prior to the preparation of this book of readings, leading authorities in the field of secondary school administration were contacted and re-

quested to indicate the major problem areas on which a study of secondary school administration should focus. Although there were many specific concerns, the areas of concern reflected by nearly all authorities were the need for change; the effects of the changing organizations, curricula, and instructional practices on the educational program; a knowledge of leadership and some of the latest administrative practices; and an understanding of the changing roles of research and the federal government as related to secondary education.

The chapters of this book have been organized around these primary areas of concern. The central theme focuses on change in secondary education and the changing aspects of secondary school administration.

In making the specific selections for each section of the book, an attempt has been made to give major attention to the articles that are on the cutting edge of new theory, knowledge, and practices. Most of the ideas and their modifications presented herein have been published within the past five years. All students of school administration will find these ideas and practices exciting and challenging. It is hoped that an incentive for renewed dedication toward a secondary school system equal to the revolutionary needs of today and tomorrow will be the result.

Sincere appreciation is expressed to the many authors and publishers who are cited throughout this volume, to Lloyd Chilton and Barbara Conover, editors; to Ken Lindsay, Janette Palmer, and Linda Lou Nelson, who assisted with the typing and proofreading; and to my colleagues who assisted in numerous ways, all of whom have helped make this publication possible.

G. F. O.

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Prologue

TRENDS TOWARD EDUCATIONAL REVOLUTION *

Glen F. Ovard

We are living in what may prove to be the most epoch-making period of time. There is evidence all around that we are witnessing and participating in one of those tidal waves of human thought, emotion, and action that periodically sweeps over the world and changes the direction of human endeavor. This is a revolutionary period.

There is a social and political upheaval. Long-accepted social values have been rejected and new ones have been adopted. Moral standards of our past generations have been set aside in theory and practice. Modern science has disproved or supplanted many of the dogmas of religion. Man has ventured into the world beyond the world and walked in space. The atom has been made to work for man—and against man! World governments have evolved to a point where peaceful coexistence, though not a reality, is a necessity.

* FROM an address given by Glen F. Ovard at Utah Secondary School Principals Workshop, Summer, 1965, Glen F. Ovard (ed.), *Individualizing Instruction: The Administrator's Role*, Utah State Department of Public Instruction, 1965, pp. 9-14. Reprinted by permission.

Anxieties of man have increased. Long-established beliefs and practices have been challenged, disproved, and changed. Man, his society, and his institutions have been forced to adjust to the dynamic forces of revolution.

Even in a revolutionary period, man must continue to strive for the good. Man must still search for happiness. Man must still educate his children. The institutions of our civilization are faced with the need to adjust to the new conditions. Education has been greatly affected by this period of turmoil.

During a revolutionary period the need for education is greater than at any other time. Education is the process by which the new values, philosophies, facts, and knowledge give positive direction to future actions.

To find solutions to the population boom, the explosion in knowledge, and the science-oriented, automated society of the future demands a new education. What the nature of this education will be cannot be fully visualized at this time, for the period of adjustment is just commencing. However, certain trends and conditions are evident. Six of these trends are discussed.

TREND #1. EDUCATION FOR CHANGE

In our future schools the youth of the nation, in fact individuals of all ages, must be taught the dynamics of change. This new education will teach about change in all facets of the society. It will condition the youth for the continued change that must take place. But more important, it will teach them how to change. Teaching people how to change and adjust to the cultural and technological revolution is a new, unexplored frontier in public education. The need for such an education becomes increasingly evident each day.

TREND #2. EDUCATIONAL PROGRAMS FOR ALL YOUTH

The people of our nation have taken pride in the fact that our educational system is planned for "all American youth." Our youth are encouraged to go to school and, in fact, are forced to go. Such action has been justified on the grounds that education is good for the welfare of both the individual and society.

In recent years the emphasis has been on quality education because the problem of quantity has been solved. However, making education available and even requiring children to attend school have not provided an education for all youth. Approximately one-fourth of the students of the nation do not graduate from high school. Education is available to all, but it should not be concluded that all are receiving an education. Certainly the

dropout is not receiving an education. The school principal cannot be content because he offers a standard program available to all. In the immediate future he must find the programs and create the motivational factors that will keep all students in school.

Secondary school administrators might well ask, "Why the concern for the dropout and the disadvantaged students?" The answer lies in the changing nature of the society. The War on Poverty program has shown that "the poor" are usually, the disadvantaged—parents and youth—who lack enough education to be productive in a technological society. The U.S. Department of Labor estimates that each year automation eliminates 200,000 factory workers' jobs. Some estimates place the total figure as high as 40,000 jobs eliminated a week. At the same time that jobs are decreasing for those less skilled, a larger number of youth than ever before are entering the labor market age. During the 1950's unemployment of youth became a problem. During the 1960's, 26 million young people will be entering the labor market, or 40 per cent more than in the 1950's.

The National Education Association Project on the Education Implications of Automation indicated that the undereducated and unskilled will learn the hard way that employment and education go together. The youth who are not left by the wayside are those who can demonstrate their ability to learn new skills and adapt to new situations. The reluctant learners are our concern and we must provide a place for them in the world of technology. A curriculum must be developed that is relevant to the present life and interest of the student. Disadvantaged and culturally deprived students must have programs that teach basic skills, relate school experience to work experience, provide on-the-job training, and help make up cultural deficiencies. The challenge to the principal is to develop the curriculum that will make education for all an actuality rather than a glowing generality.

TREND #3. PROVISIONS FOR INDIVIDUAL DIFFERENCES

Stated in the foregoing paragraphs is the basic concept that education is for all American youth. However, when one analyzes American youth, one finds that they are not all the same. They are different in intelligence, abilities, interests, values, cultural levels and backgrounds, and physical development. The Educational Policies Commission in its statement on the goals of education recognized that students are different and that the differences must be reflected in the curriculum. Programs for the blind, the deaf, the slow learners, the gifted, and the handicapped have been included in the curriculum. Special rooms, special facilities, and special teachers are needed in many of these programs. Providing all the nation's children an education commensurate with their needs is still a unique goal in educa-

tional thought. When secondary school administrators provide a curriculum to meet this goal, a big step toward individualizing instruction will have been taken.

In addition to providing an education for all youth, the principal must be concerned about the quality of the education. An education that promotes individual excellence implies that each student will receive an education commensurate with his ability. Therefore, the challenge is not only to provide broad programs for all, but also to adjust these programs to the individual capacities of all students. Such programs will allow students to progress at their own best rate but at the same time will make it possible to maintain quality levels of achievement for each student.

Some of the experimental individualized programs are currently meeting both of these requirements. In these programs the student, parents, and teachers set the following goals for the student on the basis of all information available: (1) the rate of achievement—how far the student will progress through the curriculum, and (2) the level of quality—how well the student will achieve. Both the rate and quality levels are different for each individual student. The principal must organize his school, facilities, and staff to make this type of learning possible.

TREND #4. ORGANIZATION OF INSTRUCTION

The organizations of the future secondary schools must be based upon the needs expressed in the changing society. The proven innovations of today will likely be the standard practices of tomorrow. The nongraded school, large group instruction, small group instruction, and individualized instruction will become the traditional programs. Variations of these patterns will be numerous as programs are adapted to meet the unique needs within communities.

The emphasis will likely shift towards individualized and small group instruction as technology for individualizing instruction becomes more commonplace. Flexible scheduling in its many forms will likely be a standard practice in the future.

However, the principal must make the changes that are in evident need today. Also he must be flexible so that changing structure can result as future needs might dictate. The principal might well adopt these mottos: "If it works, it's obsolete!" and "If I'm satisfied, I had better retire!"

TREND #5. UTILIZATION OF THE STAFF

Like school organization, the organization and administration of the staff is in need of change in most schools today. The advent of large and small group instruction and individualized instruction presumes that the faculty

will be organized differently. Team teaching in a common subject area and in combined subject areas will also become standard practice.

The role of the teacher will not be the same. If the new structures are to be effective, the principal must help retread the faculty members for the new types of teaching. This retreading will be done in summer workshops, college courses, institutes, and all manner of in-service work. A common preparation period for teaching teams will improve the team-teaching coordination and efforts. The principal will organize, provide the time for, and encourage faculty members to make the adjustments needed.

Another change in the staff will be in the quality of teacher preparation. Master and doctoral degrees will become commonplace among the secondary school teachers. Teachers will be more specialized. The trend toward greater specialization will likely be an encouraging factor in the movement toward team teaching.

TREND #6. USE OF NEW MEDIA AND TECHNOLOGY

Utilizing new media and improved technology will be a dynamic force in changing to individualized programs of instruction. A brief summary of most of the newer media will suffice at this point. Programed materials have greatly aided and expanded the approaches to individualized instruction. As more self-teaching materials and devices such as microfilms, filmstrips, videotapes, individualized television receivers, and computers are made available, this type of education will increase. Overhead projection, 8 mm films, open and closed circuit television and other audio-visual aids will improve teaching.

Further automation will reduce the many hand operations of principals and teachers. The first electronic brain, Univac I, went into retirement at the Smithsonian Institution after only twelve years of operation. Its successor works a hundred times faster than Univac I and a million times faster than a human clerk.

The future school will likely have an instructional computer center or computers in every classroom. The question might be asked, "What is it that talks to a student, guides him forward or backward through subject materials, councils him, changes his attitudes, collects his lunch money, and assigns his homework?" If you say "A teacher," you will be only partially right. Much of this work will be done by a digital computer.

Computers are already being used to schedule students, store data, and do reports. School officials will move on to the more complicated process of rescheduling students on a daily basis. Such a process is already in experimental testing stages at the Brigham Young University Education Experimental Programs and Laboratory Schools.

As students are rescheduled daily based upon their achievement and needs as perceived by themselves and their teachers, they will also be

guided through learning programs by a computer. Currently programs of instruction are being adapted to the computer. This technique is called C. A. I.—computer assimilated instruction. A computer is more than an advanced teaching machine. It is flexible. It can change the mode of instruction during a lesson to adequately adjust to the responses of the students. It may advance or send him backward in the program through many branching techniques.

The computer will be used for student information retrieval. Researchers expect to be able to feed the statements a person makes into a computer and get back a written description of his personality and how he could be expected to behave in certain situations. The same equipment will enable teachers continually to update their knowledge of the student. Records on magnetic tapes will be updated on the daily progress of each student. By monitoring this progress the teacher can prescribe educational programs and measures before a student has developed a serious educational problem. The principal, librarian, and guidance personnel, as well as teachers, will profit through the computer's ability to classify and store material and retrieve and disseminate on demand information about the student. The information retrieval system (I. R. S.) will also link secondary schools by data transmission lines to universities and regional information centers. These central archives will gather, index, and store information from all sources—reports of experiments and tests, technical publications, doctoral dissertations, government reports, and so on. The day isn't far away when the information of the world, both audio and visual regardless of the source, will be at the command of each individual student through simple dialing techniques.

Optical scanners coupled to digital computers will make these information centers possible. They will scan printed and handwritten texts from around the country, simplify them, and catalogue them by author, concepts, or key words. The federal Educational Research Information Centers are one step in this direction. It is not inconceivable that the I. R. S. of the future school will direct information to a person who has not yet asked a question, but who does have a need for the answer. The I.R.S. could index the content of a new document and select the student, teacher, or administrator whose "information-need profile" indicates that the content would be relevant to him.

SUMMARY

We are indeed living in a revolutionary period—a time of great challenge to responsible leaders in education. I hope the succeeding presentations aid both the prospective and practicing secondary school administrator in preparing for change in his innovative school of today and his revolutionary school of tomorrow.

The Changing Focus of Secondary Schools

A Mission for Secondary Schools

Education and the Nations Future

The true test of the civilization is the kind of man—the citizen—that the country turns out, and education is the force that molds the man into a citizen. During a period of revolutionary changes, the needs of each individual, as well as those of society, require new and expanded educational programs. This need was strongly set forth by the President of the United States in the following selection.

A MESSAGE FROM THE PRESIDENT *

Emerson said, "The true test of a civilization is not the census, nor the size of the cities, nor the crops, but the kind of man the country turns out."

* FROM *Contemporary Issues in American Education*, Consultant Papers prepared for use at The White House Conference on Education, July 20-21, 1965, U.S. Department of Health, Education and Welfare, Office of Education, 1966, pp. 5-6. Reprinted by permission.

Education, more than any other single force, will mould the citizen of the future. That citizen in turn will really determine the greatness of our society. And it is up to you to make that education equal to our towering expectations of the America that we love and the America that is to come. . . .

It is . . . time to reflect on our mounting needs and on our present deficiencies. More than one million students . . . drop out of schools, their talents wasted, their intelligence lost to the nation, their futures shadowed by their failure, and by our failure.

In the next five years attendance in elementary and secondary schools, at 48.1 million in the fall of 1964, will increase by more than four million—almost one million students per year. We will need 400,000 new classrooms to meet this growth . . . half a million of our present classrooms are already more than 30 years old.

And beyond 1970, the demand for education at every level will continue to increase.

We will need more classrooms; we will need more books; we will need more teachers; we will need more schools on a scale that we have never dreamed of even a decade ago.

Nor is it enough to give a student a place to sit and a teacher to learn from. We must make sure that the quality of that education is equal to his capacity to learn. We must make sure that it stimulates creativity rather than stifling it. We must make sure that it enlarges the mind rather than narrowing it—that he receives not merely a diploma but learning, in its real, broadest, most meaningful and most humane sense.

In pursuit of these goals I have asked the White House to send out invitations to the White House Conference on Education. That conference will take place on July 20 and 21 of this year at the White House in Washington. It will bring together educators and informed citizens from every state in this nation. It will seek the answer to the immense question: How can a growing nation in an increasingly complex world provide education of the highest quality for all of its people?

The search for this answer radiates into every corner of American life. It must deal with educational opportunity and techniques from the preschool age to the most advanced of studies. It must look beyond the classroom to the family and to the surroundings and the environment of the student. For the process of learning is not a carefully defined and isolated segment of a person's life. It is part of an organic whole, embracing all the forces which shape the man. And if we ignore these forces, we do so at the peril of learning itself.

Nothing is more dangerous than the easy assumption that simply by putting more money into more schools we'll emerge with an educated and a trained and enlightened nation.

And it's this kind of assumption that I came here to challenge today. I

want you to bring all the tools of modern knowledge—from physics to psychology—to bear on the increase of learning. And if these tools are still inadequate, then it's our job to fashion new ones and better ones.

To guide discussion in this conference we are formulating a series of questions, and I hope you'll give these questions your most careful thought and your boldest imagination . . . (at) the conference. They include:

How can we bring first-class education to the city slum and to the impoverished rural areas? Today the children of five million families are denied it.

How can we stimulate every child to catch the love of learning so he wants to stay in school? One million children now drop out of schools each year.

How do we guarantee that new funds will bring new ideas and new techniques to our school system—not just simply expand the old and the outmoded?

How can local and state and federal government best cooperate to make education . . . the first among all of the nation's goals?

These are a few of the important questions which I hope the White House Conference examines.

And I would like to mention one other: Our country today is among the leaders in the community of nations of the world. Then how well is our education system preparing our citizens of this one nation for their responsibility to some 120 other nations in the world? . . .

No strain in our national life is more deeply rooted or more enduring than (our) faith in learning. It is a pathway to opportunity and the good life. It is the key to wise and satisfying use of our leisure time. It is the door to each man's highest use of his highest powers—which is happiness. It can bring fulfillment to the many, and, to the happy few, those transcendent achievements which really enrich the human race.

And if these things are true for every society, how much more important they are to our free society.

Every corner of this world in which we live, not only our democracy itself, is today being challenged. As the world grows in danger, and as it grows in complexity, and as humanity seems dwarfed by the forces it has loosed, man's ability to govern himself is again being questioned.

We will not prove democracy's strength by faith or even by the experience of our past. We will prove it by the works of the future. . . .

That future—hopeful but still unknown—is today struggling to be born in the millions of young and waiting minds in thousands of classrooms in this restless continent.

LYNDON B. JOHNSON

Objectives for Secondary Education

A plea for new educational programs by the President is only one of many such requests from responsible individuals. The forces and movements in society for change in education cannot be denied. However, the innovative principal must recognize that change can be in any direction. The direction of change should be toward important long-term objectives. A summary of the aims and objectives that have provided direction to secondary education follows.

AIMS AND OBJECTIVES OF SECONDARY EDUCATION *

Glen F. Ovard

THE NEED FOR GUIDING PRINCIPLES

The administration of a secondary school should be regarded as a positive venture. Education has long been viewed as an institution that educates the young into the accepted value patterns of the culture. Hitler knew he had to control the institutions of education, which were responsible for the promotion of attitudes, values, knowledge, and understanding of the society. Today, the Communists are well aware that the training of youth must be controlled if the Communist doctrine is to triumph. *Sovietskaia Pedagogika*, the official organ of the Academy of Pedagogical Science, states: "The ideological training of our youth is above all political," and "we must not forget for a moment that every science is party science," and "teaching cannot be divorced from the politics of party and state," and "workers in pedagogical science must first of all study stubbornly, persistently, and consistently the science of sciences—the Marxist-Leninist theory," and they "must become bold and militant propagandists of the great Communist ideas of educating the new man."¹

It is not the purpose of this chapter to set forth the idea that American education or American educators must become bold, militant propagandists in educating the American youth to some super race or utopian concept of a new world order. However, it should be understood that American

* FROM *Administration of the Changing Secondary School* by Glen F. Ovard, pp. 100-06. Copyright © 1966 by The Macmillan Company. Reprinted by permission of Macmillan Company.

¹ *Sovietskaia Pedagogika*, No. 10-11, October-November 1946, pp. 3-8.

secondary education is not an aimless enterprise blown hither and yon by the whims of any administrator, public official, or partisan group.

Education as a process is neutral and as such can produce Stalins, Hitlers, Lincolns, and Gandhis, but education sponsored by a community, state, or nation cannot be neutral. The very purpose for which the schools are organized in a given society calls forth commitments. Inherent in any educational enterprise is a commitment toward some general and/or specific goal. The crucial phase in education for a democracy or a dictatorship is the selection of the aims and objectives.

SEVEN CARDINAL PRINCIPLES OF EDUCATION

It has been shown that public secondary education received a rather slow start in the United States. The direction of the educative enterprise developed quite slowly. However, after the national committees began to set forth their now famous reports, new direction and unification toward common ends became more universal.

In 1918 a famous report by the Commission on Reorganization of Secondary Education, known as the "Cardinal Principles of Secondary Education," was published. This report reviewed, among other ideas, the need for reorganization of secondary schools, the goals of education in a democracy, the role of secondary education in achieving these objectives, and the need for relating the curriculum to these objectives. This report first made clear the purpose of education in a democracy by stating: "The purpose of a democracy is so to organize society that each member may develop his personality primarily through activities designed for the well-being of his fellow members and of society as a whole. . . . Consequently, education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends."²

After examination of the activities of an individual in American democracy, this study reported that a sound program of secondary education needed to provide for functions involved in home membership, vocational work, and citizenship. Further, effective citizenship required that education should provide for worthy use of leisure, good health, soundness in English and mathematics, and development of ethical character. The commission then set forth the following principles of education, which are commonly known as the Seven Cardinal Principles of Secondary Education:

² Commission on the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education*, Bulletin 35 (Washington, D.C.: U.S. Bureau of Education, 1918), p. 9.

1. Health.
2. Command of fundamental process.
3. Worthy home membership.
4. Vocation.
5. Citizenship.
6. Worthy use of leisure.
7. Ethical character.

THE TEN IMPERATIVE NEEDS OF YOUTH

The Seven Cardinal Principles became the basic statement of objectives from 1918 until World War II. In 1942, the Educational Policies Commission, a commission approved by the National Education Association and the American Association of School Administrators, began to work on policies for postwar education.

Education for All American Youth was published by this commission in 1944. A major emphasis in this report is that (1) education is for *all* American Youth and (2) every member to be educated is different. Eight categories of significant educational differences were enumerated. These differences are as follows:

1. Differences in *intelligence and aptitude* will exist, regardless of modifications in the environments of individuals. While certain portions of these differences are inherited, even these cannot be predicted from parentage. These differences require different educational procedures, content, and standards of speed and achievement.

2. Differences in *occupational interests* and outlooks are both desirable and necessary. They require guidance to match abilities against the requirements of the job, desires against opportunities. They require curriculum adjustments that provide the necessary preparation for thorough workmanship in all occupations. They require administrative arrangements that will remove or minimize undemocratic "social status" distinctions among occupational fields and their corresponding educations.

3. There are differences in *availability of educational facilities*, differences caused either by location of residence or family economic status. The elimination of these differences is an entirely practicable matter of administration and finance, involving the proper organization and location of schools, and the provision of transportation and student-maintenance facilities, of state and federal equalization funds, and of public or private scholarship funds.

4. There are differences in *types of communities* in which youth reside. Insofar as these differences are educationally significant, they can be met by a guidance program providing information and outlooks which transcend community barriers, and by curriculums which are adjusted to the needs and opportunities of diverse communities.

5. There are differences of opportunity resulting from differences in *social and economic status*, often aggravated by differences in *race*. The removal of such inequalities is a difficult matter, often requiring basic social and economic changes in the community. Yet, even so, these differences can be measurably reduced by wise educational leadership and administration, and by the objective study of community problems in schools.

6. There are differences in *parental attitudes and cultural backgrounds*. In many cases, cultural differences can be utilized for valuable education purposes. In other cases, where differences give rise to conflict or jeopardize the proper development of children and youth, the undesirable effects may be minimized through a program of home visitation and parent education.

7. There are differences in *personal and avocational interests*. Within reasonable bounds, these differences may well be encouraged by a broad curriculum with opportunities for some selection of studies.

8. There are, finally, differences in *mental health, emotional stability, and physical well-being*. Extreme disabilities must be compensated for in special schools and classes. Other temporary or less serious deviations from normal health may be met by appropriate adjustments in curriculum and regimen and by remedial health instruction and school health services.³

It was recognized that youth are different. Further, the principal must reflect these differences in the curriculum. It is also true that youth have qualities that are common to all. These common qualities were enumerated.

The report then set forth a plan of education for two imaginary American communities, which were called Farmville and American City. Finally, the Commission issued its statement on educational needs, or a summary of ten "imperative educational needs of youth." These are:

1. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations.

2. All youth need to develop and maintain good health and physical fitness.

3. All youth need to understand the rights and duties of the citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.

4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.

5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.

6. All youth need to understand the methods of science, the influence of

³ Educational Policies Commission, *Education for All American Youth* (Washington, D.C.: National Education Association, 1944), pp. 15-16. Reprinted by permission of the National Education Association.

science on human life, and the main scientific facts concerning the nature of the world and of man.

7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.

8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfactions to the individual with those that are socially useful.

9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work cooperatively with others.

10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.⁴

Many principals looked upon the "ten imperative needs of youth" as ushering in a new era in secondary education. Many schools changed their curriculum and their methodology.

THE WHITE HOUSE CONFERENCE ON EDUCATION

At midcentury, President Eisenhower called for a White House Conference on Education. The conference reviewed many aspects of education. One phase of this conference was entitled "What Should Our Schools Accomplish?" This educational conference was unique in its scope. Local districts throughout the United States organized conferences and held public meetings in which lay citizens discussed the vital phases. Delegates from the local areas were then sent to the state to discuss the issues on a state level. State delegates then met at Washington.

All 53 states and territories took part in the program, with more than 3,500 local, county, regional, and state conferences being held prior to the White House Conference in Washington on November 28 to December 1, 1955. More than a half million Americans were involved in these conferences.

Adam S. Bennion and William Carr summarized the conclusions of the 2,000 laymen and professional educators at the national conference. Some of the philosophy and objectives accepted in this report are presented below.

It is the consensus of these groups that the schools should continue to develop:

1. The fundamental skills of communication—reading, writing, spelling, as well as other elements of effective oral and written expression; the arithmetical and mathematical skills, including problem solving. While schools are doing the best job in their history in teaching these skills, continuous improvement is desirable and necessary.

⁴ *Ibid* pp 225-26.

2. Appreciation for our democratic heritage.
3. Civic rights and responsibilities and knowledge of American institutions.
4. Respect and appreciation for human values and for the beliefs of others.
5. Ability to think and evaluate constructively and creatively.
6. Effective work habits and self-discipline.
7. Social competency as a contributing member of his family and community.
8. Ethical behavior based on a sense of moral and spiritual values.
9. Intellectual curiosity and eagerness for life-long learning.
10. Esthetic appreciation and self-expression in the arts.
11. Physical and mental health.
12. Wise use of time, including constructive leisure pursuits.
13. Understanding of the physical world and man's relation to it as represented through basic knowledge of the sciences.
14. An awareness of our relationships with the world community.⁵

To achieve these goals for every child the schools must have an effective program of guidance and counseling in preparation for the world of work.

It will be noted that no attempt was made to push these ideas as a new statement of objectives for America's schools. In fact, the report said that the "schools should continue to develop. . ." that which they were doing. However, the number of objectives was enlarged to 14. Some new elements were included. The significance of the White House Conference was: (1) it reaffirmed previous statements of objectives that are important in our democracy, (2) it adapted these objectives to the changing conditions of the day, (3) emphasis was placed on the needs of "every child," and (4) a diversified program to meet the objectives was required.

PRESIDENT'S COMMISSION ON NATIONAL GOALS

In 1960 the President's Commission on National Goals made its report. Its introduction reads, "The paramount goal of the United States was set long ago. It is to guard the rights of the individual, to ensure his development, and to enlarge his opportunity." In keeping with this general goal, the specific goals for education were stated: "The development of the individual and the nation demands that education at every level and in every discipline be strengthened and its effectiveness enhanced. . . . There must be more and better teachers, enlarged facilities, and changes in curricula and methods. . . . Above all, schooling should fit the varying capacities

⁵ The reports of the chairman as given in Washington, D.C., November 28 to December 1, 1955.

of individuals; every student should be stimulated to work to his utmost; authentic concern for excellence is imperative."⁶

RECENT DEVELOPMENTS

Many social changes and technological advancements have been made by our society since the White House Conference report was issued in 1955. The effect of these changes on schools and school curricula has been of extreme importance. Many states and local districts have increased graduation requirements in mathematics, science, and languages. Emphasis has been placed on "gifted programs." Experimental programs in large and small group instruction, improved staff utilization, television teaching, and many other programs have been introduced. A major revision in the whole area of secondary education seems imminent. . . .

Throughout all these changes and experiments the need for new objectives has not been indicated. There has been an emphasis placed on certain objectives such as "ability to think and evaluate constructively and creatively." In 1961 the Educational Policies Commission set forth a new statement *The Central Purpose of American Education*. In this statement the ability to think was identified as the central purpose of education and it was emphasized that every student's rational powers must be recognized as centrally important. . . .

The purpose which runs through and strengthens all other educational purposes—the common thread of education—is the development of the ability to think. This is the central purpose to which the school must be oriented if it is to accomplish either its traditional tasks or those newly accentuated by recent changes in the world. To say that it is central is not to say that it is the sole purpose or in all circumstances the most important purpose, but that it must be a pervasive concern in the work of the school. Many agencies contribute to achieving educational objectives, but this particular objective will not be generally attained unless the school focuses on it. In this context, therefore, the development of every student's rational powers must be recognized as centrally important.⁷

⁶ The Representative Assembly, *Goals for Americans. The Report of the President's Commission on National Goals* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1960), pp. 1, 6-7.

⁷ Educational Policies Commission, National Education Association, *The Central Purpose of American Education* (Washington, D.C.: The National Education Association, 1961).

Problems to Be Faced

Changes for the Next Generation

With a focus firmly established, the secondary school administrator is prepared to look at problems and relate them to planning for the changing schools. Obviously, not all problems can be presented in this short section. However, the following selections define some of the problems and set the stage for new directions.

The following selection presents some highlights of how young people will live in 1985 and what schools must do to prepare them.

PROSPECTS FOR THE NEXT GENERATION *

Outposts on the moon, 200-mile-an-hour commuter trains and 200-passenger ocean jets, hemispheric common markets, a cybernated economy, lifelong education and retraining, more leisure time to spend waiting in line at leisure-time activities—these are some of the prospects for the next generation that adults accept as a part of the pace of life and that young people will accept as a way of life.

They are among the milder trends that Donald N. Michael deals with in his study, *The Next Generation*.¹ Interwoven with these increasingly familiar predictions are ideas that should jolt any complacency or apathy that exists among people who work with youth—teachers, counselors, sociologists, and parents.

Michael examines the next 20 years, using tendencies already apparent in our political and social environment to predict tomorrow's world. It has Orwellian overtones, a depressing sense of impotency for the individual, and, what may be most distressing of all to today's concerned adult, a possibility that as many of the next generation will be as content with their complex world as the indifferent and apathetic of today.

The Next Generation grew out of studies that Michael, a social psychologist now with the Institute for Policy Studies, made for the President's Committee on Juvenile Delinquency and Youth Crime. Directed at those concerned with youth development, it builds this broad outline that young people will live with in 1985:

* FROM *The Shape of Education for 1965-66*, Vol. 7, by the National School Public Relations Association, pp. 5-7. Copyright 1966 by National School Public Relations Association. Reprinted by permission of the Association.

¹ Michael, Donald N. *The Next Generation*. New York: Random House, Inc., 1965. 207 pp.

to what is needed quickly to produce a generation of adolescents and young adults more capable of dealing with the world of the 1970's than are those being produced today."

Changing student perspectives—and freeing them for adaptability to change—require teachers whose values "are also appropriate to tomorrow's world." However, Michael points out, primary and secondary teachers for at least the next decade will be recruited from backgrounds that stress lower-middle-class values of good behavior, conservatism, and conventionalism in many aspects of life. They do not, he says, "notably stress commitment to task, craftsmanship, independence, integrity, spontaneity, . . . social and cultural tolerance and experiment, and attitudes encouraging the expectation of occupational changes."

Michael concludes with a series of questions for those involved in youth development programs, including:

- As we move into a period of turmoil and frustration as well as accomplishment, what is the proper balance between optimism and cold realism to be conveyed to youth?
- What kind of civic participation do we teach, if tomorrow's government problems will be dealt with chiefly by a highly trained professionalized group?
- What trends are most germane for particular youth-development activities? What do we need to know about them?

Not asked by Michael, but implicit in his concern over the opportunities and directions for the next generation, is the effect of today's actions and values upon the generation after the next—the one that will live and lead after the year 2,000. Conjectures about their world are few. But their parents and teachers are now being born and some are entering school.

Educational Change Needed

Quantity Leads to Quality

Ellsworth Tompkins, the executive secretary of the National Association of Secondary School Principals, has an excellent opportunity to view the needs of secondary education and the role of the school administrator in the schools of tomorrow. In this selection he states that the demand on secondary education for experimentation and innovation could lead to results that might sound like science fiction. Basic to the consideration for change is the importance of quantity education. Out of more education at all levels and for all people can come better education.

SECONDARY EDUCATION TOMORROW—INTRODUCTION *

Ellsworth Tompkins

Wendell Johnson has said that "The future from which we can never escape swiftly becomes the past which we can never recapture."¹ In education there have been signs of the future and they must be assessed. That is why we are looking into the future today with our topic, *Secondary Education Tomorrow*.

I have a few preliminary remarks. They will deal with two convictions, on educational change and on educational quality.

I

Let me begin by calling your attention to some exciting statistics. Secondary-school enrollments have about doubled in the United States in the decade 1954-1964, 8.2 million to 15.2 million. In 1974, 19.9 million are expected to be enrolled. This will be a 225 per cent gain over 1954. By 1974 there will be 8.7 million students attending degree granting colleges and universities, as compared with the 2.5 million in 1954 and the 5.0 million in 1964.

The population of the elementary age-group will increase little, because a high percentage of enrollment has already been attained.

Thus the tremendous increases in enrollment will be in the secondary school and higher education. The impact of this increase in numbers on teaching, curriculum, facilities, and finance will be enormous. By 1974 we may recall the good old days of 1954 and the old days of 1964. But that will do little good. If we think we have seen marked change already, there is no doubt that secondary education and higher education face demands for experimentation and innovation, the extent of which may today sound like science fiction. If business as usual is contemplated by either secondary schools or colleges, the institutions so inclined may become anachronistic, and hence play a lesser role in education than they once did.

So you have to decide what prophets to follow. But necessary changes in secondary-school programs will demand educational imagination and inventiveness hitherto displayed in relatively few schools. A major question is, what shall we do to teach, to counsel, to house, to finance, and to pro-

* From *The Bulletin of the National Association of Secondary School Principals*, April, 1966, pp. 71-72. Reprinted by permission of the NASSP and the author.

¹ Wendell Johnson, "People in Quandaries: The Semantics of Personal Adjustment," Harper & Brothers, 1946.

vide leadership for the 19.9 million students who will attend secondary schools in 1974?

II

Is it true that more education may not be better education? Do we believe that a high quality of education can be achieved without respect to quantity, that is, without reference to the universal enrollments common in the United States and increasingly common in major nations of the world?

I would answer "No" to both of these questions, because there has to be more education everywhere to satisfy man's quest for learning and wisdom. For a hundred years many educational systems have served an elite of the population. But many nations are finding that the education of an elite excludes the mass of youth now seeking educational advantages. It also tends to create a caste system in education, which is incompatible with the aspirations of youth in a democratic society.

The goal of education in the United States is that schools have a place for all normal children and youth. It is well on its way to full achievement. Other nations are now experiencing the educational road traveled by schools in America. It is my conviction that quality of learning makes sense only when it grows out of quantity. Quantity—that is, attraction to school enrollment of all who desire it, regardless of social or racial origin—is the avenue to good education. If this were not so, why the concern over the conservation of human resources in general, and the nurture of potential and actual dropouts in particular? Why proposals for anti-poverty legislation to help those without much of a chance to acquire educational skills more useful to them? I see no conflict between quality and quantity, but would argue that quantity has to come first in the scheme of things. The priority that nations attach to education relates first of all to expansion of enrollment, not to its restriction, to *more* education, out of which can come *better* education.

A Program for the Society of Losers

The secondary schools and their administrators have still to solve some major problems in the schools of tomorrow. Fred T. Wilhelms, associate secretary of the National Association of Secondary School Principals, maintains that we must solve the problem of the "society of losers"—young people who are not doing well in school and who do not look as if they would do well out of school either. In cities and in rural areas, this neglected group of young people presents challenges equal to the best skills and knowledge that can be found in the profession.

SECONDARY EDUCATION TOMORROW—CURRICULUM IMPROVEMENT IN A NEW KEY *

Fred T. Wilhelms

As I look forward, two very different prospects catch my eye. I see a dark cloud, already upon us but looming larger every year. At the same time I see a shaft of sunlight breaking through; and it, too, grows stronger and brighter as I watch.

In varying degrees, depending on the kind of school you work in, you know the shape of the cloud all too well. It consists of those students whom, in another session of this convention, we have called the "society of losers": young people who aren't doing very well in school, and who don't look as if they will do very well out of school either; the group who give you and your teachers endless headaches, but to whom, in all honesty, we give a good many headaches, too, because we don't quite know what to do with them.

Most of them come from the lower classes—but not all. A tragically large number of them come from the downtrodden minority groups—but not nearly all are Negroes or Puerto Ricans or Mexican-Americans or Indians. The surest place to find them is in the slums at the centers of our big cities—but you can find them in the country and in the suburbs, too. By the time they reach the secondary school they are a couple of years behind; they don't like their studies; and even their intelligence itself is stunted. Many of them are alienated and hostile; many more are hopeless and lost; they've lost confidence in themselves and in their futures. Not a few are truly ill, mentally and spiritually.

The problem is still growing. By 1970, it is estimated, half of all the youngsters in our big-city schools will be classifiable as culturally deprived. Then, as now, they will mostly be living in slums festering with crime and delinquency. A staggering proportion of them will be living in homes that have broken down. Their environment will include almost nothing to lift up their hopes, and help them aspire to a higher grade of life. In the midst of our affluent society, with all its opportunities, they will not even have had the opportunity to learn what the opportunities are.

It is a terrible problem. We in education—who did not cause the problem—cannot be blamed for often seeing it in terms of how it spoils our schools—how it forces dedicated teachers and administrators to spend themselves against the blank face of futility. But the problem does not end

* FROM *The Bulletin of the National Association Secondary School Principals*, April, 1966, pp 79-86. Reprinted by permission of the NASSP and the author.

with the schools. The future for these children is grim. Unemployment is already epidemic among them. (Look at the figures a minute: We have brought national unemployment down nearly to 4 per cent. But that figure masks the problem. Actually the unemployment of married men is just a shade over 2 per cent. Among young men under 22 it is some six times as great; if they are Negroes, double that again. If they are poorly educated Negroes from a slum, who knows what the figure is?) Under the conditions of growing automation such young people may never in their lives have a job or any significant role.

Meanwhile the central cities where most of these people live are becoming increasingly disorganized. The controversial Moynihan Report documents the near-collapse of lower-class Negro family life. A similar study of white lower-class life in the slums might not turn out so very different. It seems to me that if one looks honestly at the future of our big cities—with their middle and upper classes fleeing to the suburbs—with their ever-larger hard cores of social disorganization, crime and grime, and hopelessness, one is hard put to find any hope that they can ever really join the bright new world of progress and prosperity.

Our society has an awful lot riding on whether we can make at least modest winners out of these seeming losers. The lives of something like a quarter of our people are at stake. The viability of our big cities—and, with that, much of the viability of our whole society—is at stake. To me it seems perfectly obvious that the next great educational push has to be a salvage operation on an enormous scale. Of course, the problem is not wholly a school problem, but we are the ones who can do most about it. What *can* we do, and how shall we do it?

I know that with the help of federal funds we are mounting many courageous efforts. I know that individual principals and teachers are working magnificently to bring in real hope. I know that we are having some success with programs of compensatory education, remedial reading, and work experience, using new media and new curriculum materials. I applaud all these things, and I deeply honor the brave men and women who are sweating them out. But I do not believe they are enough. They can make headway, but they cannot win the race with catastrophe. If it were not for that shaft of sunshine which I mentioned at the start, I should be gloomy indeed.

What is generating that growing shaft of sunshine? It is a new line of evidence, still far too little appreciated. The heart of its message is that, however stupid or apathetic or anti-social these youngsters may be now, they were not born that way. They were not born with a fixed quantity of intelligence or of any attitude. What they *were* born with was probably very much like the standard equipment of a normal cross-section of the population. So far as their inheritance was concerned, they could have become a normal cross-section of the nation.

All this is easiest to see in terms of intelligence. We have proceeded far too long on the assumption that a baby is born with an IQ which stays with him till he dies. He isn't. Today's best scientific thinking says he is born with receptors to take in stimuli and motor equipment with which to respond—and his intelligence is what *develops* out of the learning experiences he has. Depending on the quality of those experiences, he may become a moron or he may become bright. This is not necessarily to say that all are the same in their initial genetic equipment. But the range within which any one may develop is very great. The brightest boy you have in school might have been mediocre if his life had been barren. At least some of your dull boys might have been bright if their lives had been rich. The evidence behind these statements is very strong.

This is not to say that it immediately becomes easy to upgrade intelligence. After all, environment can have a fixedness almost as unchanging as heredity, and the slum child will still be living in a slum. But it is to say that, technically, the job can be done. We already know quite a bit about how to do it, and we are fast learning more. The work of Deutsch and others with preschool slum children has demonstrated the possibility of a dramatic boost in cognitive effectiveness. In the past decade you have been proving the same thing with the better students in your schools. At least, so it seems to me: I cannot explain the tremendous achievements of your abler students in science, math, etc., by saying that they've simply learned more science or math. It seems to me that they have moved to a wholly new level of intellectual functioning. There is much more evidence, going back at least to the Iowa studies of the 1930's, to prove that rich environments raise intelligence and barren environments drop it. We can even demonstrate it with that favorite of psychologists—the rat—and there we can even show that the very anatomy of the brain can be changed.

Now researchers are working at the problem of helping children *learn to learn*. The work is at an early stage, but it is promising. And the techniques are not difficult.

Let me underline what I am saying. Thinking back to that massive cloud of academic cripples, I am saying that we cannot get far by merely pressing them harder to learn a bit more reading, a bit more math, and so on. As long as they are what they now are, it's a losing battle. *But*, I am saying, *they do not have to be what they now are, intellectually*. We need to take a different approach—one that can change them into normally bright learners—and then the reading and all that will fall into place.

But, especially by the time these youngsters reach your secondary schools, other factors hold their ceiling down even worse than intelligence does. They do badly in school and many of them are unemployable outside school because of their negative attitude, their weak personality, and poor character. If we are going to make our bet on *changing them as people*, we have to change these things, too. *Can we?* Well, at least, we can

say that these things are even less fixed by heredity than intelligence is. But in the same breath, we have to admit that they are even more strongly set by environment.

So—this job won't be easy either. But, again, the evidence shows that it can be done. The evidence is not so easy to put in specific terms. The techniques are not yet clean-cut. But I can tell you that leading psychologists are excited about the possibility of a great breakthrough in increasing what they call "ego strength." You and I might prefer to call its positive mental health or wholesome personality and sound character—but we're talking about much the same thing.

Now here, we people in secondary education have a special opportunity. We may not be able to do as much as the nursery school and the kindergarten can about raising intelligence—though I think we can do a good bit. But adolescence is precisely the time when youngsters raise a whole new set of questions about themselves and the world around them. They run new surveys on their self-concept. In a lot of experimental ways, they recalibrate their relations with other people. Even though their life pattern has "set" them in a certain way, for a while, they are suddenly in a fluid state. It's exactly the time to catch them for a re-opening of their values and ideals and all their personal ways.

You see, the problem lies largely in the youngster's *perceptions*: his perception of himself, of what there is for him out in life, of what school learning is good for—of what *is* a good way to live in the first place. Those perceptions rule the way he behaves. And they are subject to change. We know a great deal about how to change them. Not enough yet, of course, but enough to be helpful.

Without imposing our values on a youngster we can help him build on the values he has, to work out a better set. Without dictating how he shall live we can help him see what life can be like. We can create situations that enable him to get a clearer, more constructive view of himself. We can bring about profound changes in his self-confidence, his aspirations, and his image of the life he is going to lead. Some of the higher horizons programs have already shown part of the way, on a small scale.

Let me underline once more what I've been saying. I believe that to solve our most severe educational problems it is not going to be enough to teach a little bit more subject matter. I believe we have got to get right at the youngster himself and change him. I believe it can be done. The evidence isn't watertight yet, but it's good enough for an educated guess.

Furthermore, I believe we can do it right while we're teaching our science, math, social studies, etc. We *have to*—because that's where the student *is*, most of the day. And that's important, for we cannot stop teaching subject matter. These youngsters need it very badly. It's an important part of what it will take to make them strong and competent.

In the past decade we've done a great deal to clean up our subject

matter and teach it better. We must not back down from that. There's just one problem: In this recent development we've been choosing and using subject matter more and more for *technical* purposes. We're going to have to learn to choose and use it also with *human* needs in mind. Perhaps we were better at that in an earlier day. In the 30's and 40's this Association sponsored a magnificent series of proposals. I think of Thomas H. Briggs and his Committee on the Orientation of Secondary Education, with their statements on issues and functions. I think of Will French and the Implementation Committee. I think of J. Paul Leonard and *Planning for American Youth*. Go back and read those statements and others of their times, as I've done recently. You'll be impressed with their tremendous dedication to the full development of the individual person *as a person*. I'm sure you'll say, as I say, we must not lose *that* set of gains either.

It's time now to put the two together: the personal-social concerns of the progressive era, and the intellectual gains of the 50's and 60's. I think that's what we are going to do. I think we are going to find ways of keeping the virtues of the new science and the new math, yet put them more at the service of the kid's own needs. I think we'll start using the foreign languages once again as a member of the humanities—as a way of putting youngsters in touch with the best that has been said in many tongues. I think the burgeoning new humanities programs are going to remember that literature and the arts are made for people. And I think that the social studies are coming up to the most profound revolution of them all.

As we go into this, we're going to have to have the nerve to stand up for what we know these youngsters need. Most of us have been running a little scared for the last ten years. Maybe nobody could blame us, in view of the barrage of criticism we took when the Russians got that first dog of theirs circling in space, and his growls scared everybody so badly that from Congressmen on down they all wanted to blame *us* for what *they* had failed to do. They set a lot of us striving for respectability, trying to prove we could be more intellectual than anybody.

All right, we've done it now—and we've learned a lot in the process. At our best we're turning out high school graduates like no one ever saw before. We've got the colleges on the run, trying to catch up. We've secured the respect of the intelligent public.

Now we're in position to stand up and say that high scholarship and intellectual refinement aren't the only things that count. It's time to say out loud that millions of our youngsters are never going to be all that intellectual anyway, that they have a right to the kind of education that fits them. There's a real case to be made for home economics and consumer education and shop—the practical kinds of things that will help these young people manage decent, successful lives. But this time we've got to see that it's not just the "practical" things they need. They have a right to learn to read the kind of literature that has something significant to say *to them*.

They have a right to be involved in music and the arts and all that gives life grace as well as dignity. They have a right to social studies that are in direct contact with the social order *they* live in. We are long overdue to start an all-out treasure hunt to find subject matter that is valid and honorable in its own right—and *that fits the youngster studying it*. If some of that subject matter seems lowly and oversimple to the university scholars and the lay critics who have been standing out there and telling us what to do, so be it. We are the people who know what these youngsters need, and it's up to us to have the nerve to demand it—and the energy to develop it.

I believe also that we are going to go back to another idea that was prominent in the 30's and 40's. As the educators of that time tried to gear education to personal and social needs, they found that the divisions between the disciplines kept getting in their way. They kept trying to bridge across, to unify, in order to pursue real problems wherever they might lead. They tried a lot of devices for this, the farthest out of which was the core curriculum. They seldom got it working very well, especially in the senior high school. It was a nice idea on paper, but they couldn't make it stick.

I think their worst problem was that they tried to work the whole core curriculum through one teacher. That teacher couldn't be a good enough scholar in all the disciplines represented. He tended to teach what he was good at and neglect the rest.

But now we have invented team teaching. We *can* have expertness in every discipline and unification, too. I predict we are going to use that device—along with independent study, which permits each youth to follow his problem wherever it may lead—to develop creative new syntheses. It's happening already. All over this country principals are helping inspired little groups of teachers pool their resources to teach each subject expertly and still tie several of them together into meaningful wholes. The combinations are varied. Unified humanities programs are springing up fast. So are combinations of the creative arts with the humanities or the social studies. Here and there science and math are interpenetrating. And most of the new social studies schemes are integrating a wide range of disciplines—from history to economics to social psychology—around central problems.

I believe that tomorrow's curriculum is going to be much less fragmented than today's. I believe that without sacrificing intellectual content it is going to be attuned much better to the growth needs of the individual.

I have keyed this talk primarily to the difficult student in the slum environment—because that is where the crisis is. But if we learn to upgrade *his* intelligence and strengthen his personality and character while teaching him the subject matter he needs; if we can fashion a curriculum that meets *his* real needs; then think how much more easily we can do it with the others. They, too, need help in the real problems of real life. They,

too, have a right to time for music and the arts and all the grace notes of a good life. They, too, need to read literature that speaks to their hearts, and study a social science that comes to grips with the real problems of their *all too real* world.

Everything I have suggested today is technically within our grasp. But much of it is truly revolutionary. It calls for new concepts and new ways. It will take strong leadership and hard work. They will be forthcoming. For myself, I simply have no doubt at all that by the time NASSP reaches its next big anniversary our graduates will be more powerful in intellect, stronger in personality, and finer in moral character.

Educational Contradictions

Richard Wynn also presents the challenge of these neglected youth and the paradoxes presented, such as the paradox of a nation that has assimilated millions of immigrants from all nations, races, and religions, but has not assimilated the native American students of a minority race. He sees the need to invest a generation of teachers and administrators with a sense of commitment, a charge of enthusiasm, and the intellectual ability to the hard task of educating those whose education is most difficult.

A LESSON IN PARADOX *

Richard Wynn

The American Association of School Administrators occasionally holds seminars in which professors of educational administration are instructed by their former students, usually practicing school administrators. The writer was privileged in being so instructed recently by a group of city school superintendents who described poignantly the heartaches as well as the high adventure of urban school administration. Here is the essence of that lesson as perceived by this professor as a syndrome of paradoxes.

There is the paradox of a nation once proud of its educational system that miraculously assimilated in the last century millions of immigrants of many races, nationalities, religions, and political backgrounds and built a great national unity while preserving sub-cultural diversity; yet the same

* FROM *Education Administration Quarterly*, Vol. II, Spring, 1966, pp. 74-76. Reprinted by permission of *Education Administration Quarterly* and the author.

nation finds its educational system a century later in near chaos in many communities because of its inability to assimilate native American students of a minority race. We are witnessing in many communities a common man's revolt against a common school system, so-called because it was presumably common to all and capable of providing equal educational opportunity for all while accommodating the unique needs of children from all strata of society. But now it apparently lacks these historic capabilities.

There is the paradox of the slum child in desperate search for an acceptable self-image, of self-respect, of personal meaning and purpose in life, attending an educational system addressed increasingly to the structure of knowledge rather than to the structure of self. This educational system is least committed to those fields of knowledge—the social sciences and the humanities—which promise most toward understanding of self. The slum child, we were told, brings a fiercely pragmatic view to his education. He seeks education for the here and now, for the practical and the meaningful, but in an educational system in which pragmatism, progressive education, and life adjustment education are in disrepute. To accommodate his pragmatic needs, we have spawned a proliferation of extra-school enterprises such as the Job Corps which are almost perfect prototypes of life adjustment education. These enterprises commonly enjoy per pupil expenditures six times greater than those prevailing in public schools. One might ask whether the present disenchantment of slum children with their schools would have occurred had schools ever really taken a more pragmatic stance and been the beneficiaries of the substantial largess which the Job Corps now commands.

There is the paradox of a society that demeaned an educator who raised the question three decades ago: "Dare the Schools Build a New Social Order?" but which now asks: Why have our schools failed to build a new social order? At the 1965 White House Conference on Education, the Commissioner of Education proclaimed that "education is now regarded as the essential, vital instrument for keeping America safe and strong, as a fundamental force shaping virtually every aspect of American life" and noted that "surprisingly, this is a relatively new concept." The Commissioner's surprise was unwarranted because the *Educational Policies Commission*, George Counts, Jesse Newlon, Ernest Melby, and others made vigorous pronouncements of this thesis more than a quarter of a century ago. Nevertheless, the thesis is finally perceived by those who now importune that education must become the keystone of the Great Society.

There is the paradox of a teaching profession which prefers not to serve those clients who need its services most. Whereas physicians work with the sick rather than the well and attorneys spend more time with those in difficulty with the law, the school teacher prefers not to teach those whose academic problems are most severe. And most school administrators prefer not to lead those school systems which are most sick but favor instead

the less bracing environment of the affluent suburb. Of all the learned professions, perhaps only the clergyman is as much disposed as the teacher to shun those who need his services most.

There is the paradox of an educational system attempting to serve an increasingly urban and industrialized society yet operating on an obsolete rural and agrarian model—state aid formulas that discriminate against large city schools, school revenue derived largely from taxes designed for an agrarian economy, school reorganization provisions attuned to the rural rather than the urban community, and professional associations apparently incapable of accommodating the needs of teachers in urban areas.

What are the implications of these paradoxes for professors of education? This professor's crystal ball does not yield all of the answers but does suggest a few tentative propositions.

Despite our rediscovered commitment to building a Great Society through education, we have adopted pre-packaged curriculum components addressed, not to the structure of society, but to the structure of knowledge, addressed to what subject matter should be taught to the college-bound youth rather than to what behavior should be learned by all. We have justified new instructional methodology and teacher deployment on the grounds that they permit better confrontation between the teacher and his subject matter. But unless we can also strengthen the essential confrontation of the teacher and the student, then extra-school organizations prompted by recent federal subsidies may pre-empt even further the school's responsibility for the total development of the whole child—if one may still use that once fashionable platitude.

Even more fundamentally we must address ourselves forthrightly to the question of purpose in education. The most central issue in education of our time, as it was in Spencer's time, is education for what? Education for the mastery of classical knowledge? Education to strengthen our national defense? Education for life adjustment? Education for personal development? Education for the reconstruction of society? Contemporary curriculum development, it appears to this writer, has been preoccupied with programs rather than with purposes. Unless the curriculum makers are attuned to the purpose of helping the slum child come to grips with himself and his world here and now, then our new "saber tooth" curriculums may even accelerate his disenchantment with his school.

With a major part of the nation's school enrollment in urban schools, the scholar of educational administration must look increasingly toward the urban milieu to perceive and illuminate the more fateful contemporary problems of education. He must increasingly enlarge and apply his knowledge of educational opportunity, curriculum, organization, finance, personnel administration, school-community relations to the realities of the urban environment. The old stratagems and even some of the old principles of administration which served the village and suburban superintendent

apparently just will not do for the city superintendent. We need new case studies, new research, new concepts, and new theory uniquely relevant to the urban condition. We need viable new programs of preparation and continuing professional development particularized for the beleaguered city school administrator. We need to invest a generation of teachers and administrators with a sense of commitment, a charge of enthusiasm, and the intellectual capital appropriate to the hard task of educating those whose education is most difficult.

Problems of Segregation and Integration

Harold Howe II moved from a public school superintendency to the post of Commissioner of Education in the U.S. Department of Health, Education and Welfare. After meeting with school officials and political leaders around the nation, he believes that the most crucial issue facing education today is segregated schools and unequal educational opportunities presented to the youth in these schools. He concludes that professional educators must speak out and act on this crucial issue.

EDUCATION'S MOST CRUCIAL ISSUE *

Harold Howe II

During the past several weeks members of my staff and I have been meeting with groups of school officials and political leaders from most of the southern States.

Against a backdrop of considerable press attention—some factual, some darkly speculative—delegations have come to my office in Washington. We in turn have traveled to the South.

While we encountered a spark or two of fire in the eyes of some of the southern representatives, the conversations were sincere and wholly useful. It was vital that they be so, for we were discussing what I conceive to be the most critical issue facing American education during the latter part of the Twentieth Century. I speak of the necessity for eliminating segregation from our schools.

* FROM an address by Harold Howe II, U.S. Commissioner of Education, before the Founders' Day Convocation, Teachers College, Columbia University, New York City, May 3, 1966. Reprinted by permission of the Office of Education, U.S. Department of Health, Education and Welfare.

In these particular discussions we focused on the segregation that has by official State policy characterized southern education for the past century and continues to characterize it in large measure even though State laws have changed under Federal pressures. But the basic issues involved in racial discrimination in the schools are by no means confined to the South. The effort to eliminate segregated classrooms will stir increasingly intense debate in every section of this country. The decisions we cannot avoid making will test both the patience and the conscience of every citizen. Our achievements and failures alike will have a significant impact on the national economy, on the quality of country ours will be, and on the individual lives of millions of people here in the United States and in foreign countries as well.

As President Johnson said last Thursday in his message to Congress urging new Civil Rights legislation:

We are engaged in a great adventure—as great as that of the last century, when our fathers marched to the Western frontier. Our frontier today is of human beings, not of land. If we are able to open that frontier, to free each child to become the best that is in him to become, our reward—both spiritual and material—will exceed any that we gained a century ago through territorial expansion.

Those of us professionally connected with education thus have a heavy responsibility to our students and to our fellow men. That responsibility is of course not ours alone. Eliminating segregation, in the schools no less than in other institutions, will require close collaboration among every element in the community. Government agencies at the local, State, and Federal levels must play their part; and so must city planners, real estate people, architects, civic and political leaders, community groups, and many others.

The call to action must come, however, from within the school itself, and it must come from those of us charged with the conduct of education. The school is where the children of the next generation now are. We cannot allow them to grow up with a cast of mind which perpetuates prejudice and which forces our Nation into another two or three decades of living with the lie that racially separate education can be equal.

Beyond its implications for the professional educator, I do not think it too much to say that continued existence of segregated schools—*de jure* and *de facto* alike—would undermine and in time destroy this Nation's spirit and vitality. Our citizens have always taken pride in their schools, regarding them as characteristically American. It would be a calloused ego indeed that would remain untouched in face of the fact that an enterprise regarded as characteristically American was in practice unfair.

And unfair is the best that can be said about the situation confronting the Negro child in the segregated classroom. Every experience he has

seems calculated to demonstrate to him that he is inferior and should resign himself to being so. The system singles him out, separating him by color from the best schools and the best teachers. The least is demanded of him and expected from him. The prescribed neighborhood he lives in, and the restrictions that shackle the adults he lives with, strongly suggest that his is a lost cause. His life at school combines with the rest of his life to make him see himself as a second-class citizen.

Great though our country's riches are, we cannot afford this waste of human lives. Nor can we lightly disregard its effect on the position of the United States in the family of Nations. Since World War II, the United States has taken the lead in the pursuit of peace and human rights. We seek to advance freedom and to relieve oppression on all fronts—in a world made up of people some two-thirds of whom are not white. When these people look at the conditions among nonwhite Americans, they have little interest in the lengthy historical explanation of how second-class citizenship for Negro Americans has come about. More likely they will conclude, to paraphrase Emerson, "What you are speaks so loudly, I cannot hear what you say." And we must therefore ask ourselves how long we can expect world leadership to be accepted from a Nation that either cannot or will not put its own house in order.

It is necessary that we comprehend these issues. It is necessary to understand that American education—education offered equally and openly to all, not just to the privileged—is on trial. It is necessary to understand that segregated classrooms are not entirely accidental; it is not wholly by chance that our largest cities are marked by predominantly white and predominantly Negro schools and that this separation of the races is on the increase in our city schools. And whatever decisions we make about maintaining or eliminating these arrangements, it is necessary also to recognize that segregated schools—in the North every bit as much as in the South—violate not only the most revered principles of this Nation but our fundamental law.

That position—particularly as set forth in the Office of Education's Revised Statement of Policies for School Desegregation Plans—has been warmly challenged. Some southern leaders, and they are not without counterparts in the North, contend that our requirements are not only unfair but illegal. By what right, many of them seem to be saying, does the Office of Education interpret "discrimination" (the word used in Title VI of the Civil Rights Act) as being synonymous with "segregation?" Why isn't it legal and just to have segregated schools as long as they are created by the choices of pupils and parents or by the patterns of residence which emerge in portions of a school district?

And thus suddenly the calendar is turned back to 1954 and the Supreme Court's decision in the case of *Brown vs. The Board of Education of Topeka*. In its opinion the Court enunciated "the fundamental principle

that racial discrimination in public education is unconstitutional," and the Court went on to say that "All provisions of Federal, State, or local law requiring or permitting such discrimination must yield to this principle." The decision ended, you may recall, with these words: "We conclude that in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal."

Fortified by these unequivocal statements—and a host of subsequent District Court decisions spelling out the position in detail—those of us in the Office of Education are on firm legal ground when we move against the principle of the dual school system in the South, with its tradition of "separate but (theoretically) equal" schools and its segregated faculties. These arrangements were originally established by State and local laws, by formal public policy. The segregation resulting from them is clearly illegal under the Civil Rights Act and under Federal court decisions.

But to the North lie quicksands of legal interpretation. No major Northern city has had—in recent decades, at least—a law or a public policy officially setting up separate schools for whites and Negroes. Segregation in the Northern schools has instead come about for a wide variety of reasons connected primarily with patterns of residence—from real estate covenants, for example, or from the flight of well-heeled families to the suburbs; and most of all, perhaps, from the subtle, insidious, undocumented influence of prejudice which herds the Negro into the city ghetto through economic and social pressures which have no standing in law but which operate as effectively as legal segregation ever did in the South.

The consequence is a clearly discernible pattern of predominantly white and predominantly Negro urban schools that have developed without any clearly official planning or policy; and the further consequence is unequal educational opportunity through segregation in many ways more complete and severe than that existing in many small Southern towns. But this segregation—Northern style—is beyond the clear purview of the Civil Rights Act, and outside the compass of other clearly established legal remedies as of this time.

We face a similarly imponderable situation even when we get into the realm of official action taken by a school system. There is, for example, the feeder pattern: by which children in elementary schools A, B, C, and D are assigned to East junior high school; while those in schools W, X, Y, and Z are assigned to West junior high. The Office of Education has received complaints from several cities that these assignments have a peculiar way of making East junior high all white and West junior high all Negro. But is this what school officials actually intended or is it just a coincidence? Unless intent can be established, it is difficult for the law to reach the problem.

We have received similar complaints about attendance zone boundaries and about faculty assignments. It would be difficult not to suspect that

some of the crazy-quilt attendance zones to be found are the result of deliberate gerrymandering to produce white or Negro schools, or that predominantly Negro faculties in Negro schools are there by something other than coincidence. But how does one penetrate the hearts and minds of those who drew those boundary lines or assigned those teachers? How does one legally establish their intent?

Office of Education teams have spent many weeks in several northern school districts trying to find the answers—trying to determine how we can successfully proceed. But we are not satisfied with our progress, and it is clear that the end to segregation in the northern schools will not come soon. What is more, we face the danger that in the South, patterns of *de facto* segregation will develop as the old dual school system disappears and as more fortunate white families flee to the suburbs of growing cities to avoid integrated schools.

The fact is that although a great deal is being accomplished under the Civil Rights Act, this law is not an ideal instrument for changing *de facto* school segregation through enforcement.

Its imperfections were recently brought to the attention of Congress through two bills—one introduced by Senator Edward Kennedy, the other by Congressman Adam Clayton Powell. Both bills are aimed directly at the problem of segregation in the big cities. Both provide greatly increased financial assistance to school districts that wish to undertake programs to alleviate their problems. One of the bills would apply sanctions against districts that remain segregated.

Whatever the fate of these proposals, programs enacted into law by Congress during the past few years are proving their usefulness in helping to make equal educational opportunity a reality for every child. Under Title IV of the Civil Rights Act, for example, hundreds of teachers are receiving special training—at institutes, financed by Title IV—in how to deal with the problems of integration effectively and smoothly. As experience has demonstrated, desegregation means a great deal more than simply eliminating separate schools. There are deep educational and psychological needs to be met, and teachers dealing with newly-integrated classrooms must know how to meet them. One doesn't hear much about Title IV of the Civil Rights Act, but it seems to me a particularly valuable and important teacher-training enterprise. I wish it were larger and more widely used.

A considerably broader program is at work today in every State and nearly every community across the Nation under Title I of the Elementary and Secondary Education Act (ESEA) of 1965. This Title, you may recall, supports a billion-dollar-a-year drive to bring an array of special new educational programs to the children of poverty—the children (a large proportion of them Negro, of course) whose home and school deprivations are most poignantly acute. The program is working, too, on the minds of school administrators across the Nation. It is showing them that poverty

is a problem in education and that education is the best way to destroy poverty. And perhaps it is causing some of them to speculate that sentencing Negroes to poverty may result as much as anything else from white people's attitudes.

Closely allied in spirit with Title I of the Elementary and Secondary Education Act is a very special program we are just now trying to get off the ground—the National Teacher Corps. Carefully selected teams of teacher-interns, led by experienced career-teachers, will—at the invitation of local school systems—take their dedication and talent and spirit into classrooms in city slums and poverty-stricken rural areas. It would be difficult to think of a more challenging or more rewarding or more necessary undertaking. I would hope that the alumni of Teachers College would be well represented among the National Teacher Corps volunteers.

All in all, there are about 100 major programs carried out by the Office of Education. Every one of them, at every level of training, has an important contribution to make to the quality of American education and to making education equally available to every citizen, without regard to race or circumstance.

At the same time, local efforts of a variety of kinds are also whittling away at the issue of *de facto* segregation. Open enrollment programs give children and parents the opportunity to desegregate themselves; the "pairing" of schools which have traditionally been white and Negro is a device with some usefulness in the fringes of the Negro ghetto; bussing of pupils to create racial balance is highly controversial but must be conceded to be helpful in some situations; forward-looking schools in many all-white suburbs have attempted to make a contribution through student and teacher exchanges of various kinds.

But all of these laudable efforts, both Federal and local, are doomed to failure unless they are fortified by further energies directed at the basic problem.

The first priority is to make sure that the schools which serve our neediest citizens are at the very least equal to the schools that serve our most fortunate. In spite of local, State and Federal efforts, this is not now the case. Buildings are older, teachers are less experienced and not as well trained, the turnover of staff is higher, and in many cases equipment, books, and special services are less adequate in those schools where the child has special handicaps to overcome. It seems to me imperative that while we are forging legal and policy weapons to attack *de facto* segregation in the cities, we must at the same time take immediate steps to bring real excellence to the segregated schools which do in fact exist. The Federal Government can contribute too by programs like Title I of ESEA, and I would hope that my office can bring forward even more adventurous enterprises in the years ahead. But as we do so, we will have to be supported by local resolution to regard the problem as crucial and to bend every effort to solve it.

Here are some things which ought to happen locally:

(1) Personnel assignment policies adopted both by school systems and by teacher organizations should be adjusted to guarantee slum schools their share of experienced, able teachers and to cut down staff turnover in these schools.

(2) Building programs for the future should be planned so that new schools break up rather than continue segregation. The Office of Education will provide Federal planning funds for such efforts right now, and if I have my way about it, we will provide construction funds before long. Moreover, with the creation of the new Department of Housing and Urban Development, there is a new Federal tool to help education in the attack on *de facto* segregation. Planning for new land use and for housing patterns in the city must go hand in hand with planning for education.

(3) The next generation of citizens should not graduate from our high schools without having confronted—through serious study and in depth—the issues which confront this society in the realm of segregation and civil rights. Efforts to get this subject into the classroom must originate with States and localities, for we cannot and should not set curriculum from the Office of Education. But we can provide research funds to start responsible efforts on curriculum development, so that 18-year-olds are not entering adult life without an understanding of the stresses and problems of this society. It is about time we stopped offering an antiseptic history of our country cleaned up to please the local power structure, and it is about time also that we started talking realities with young adults who are joining the military service and entering matrimony at the age of 18.

(4) Local school districts must provide in slum schools, all of the special opportunity programs found elsewhere in the school system, so as to create both the opportunity and the expectation of performance by the children of the poor. There is a danger, well documented by Kenneth Clark in his book *Dark Ghetto*, that our focus on the culturally deprived will result in an assumption that poor children have less promise than others and should be given a kind of special propping up to atone for their status without giving them the advantage of the stimulation which comes from a rigorous educational program. In addition to more remedial reading and more pre-school programs, we need more advanced placement in the schools of the slums.

(5) Teacher education programs must affiliate with slum schools for their practice teaching in a way to give us many more young teachers who are willing to venture "Up the Down Staircase." And most schools of education can learn from Columbia Teachers College in this respect.

These are some of the tools available to us to help make equal educational opportunity a fact of American life. But in the long run we shall overcome, not just because of laws prohibiting discrimination in the schools

or educational programs to dissolve it, but because America wants us to overcome. There is a new spirit abroad in this Nation, and a refreshing new attitude. Spreading in large part from campuses such as this one, there is new determination that we cannot and will not divorce such principles as "equal justice under law" from life as we live it.

This determination inevitably focuses on where injustice is most apparent, and injustice is nowhere more apparent than in the segregated classroom. Discrimination will not be eliminated from our schools easily or soon, but the course is in my opinion inalterably set.

The changing tide is traced by the results of opinion polls entered into the record of last summer's White House Conference on Education. One of the polls involved the question, "Do you think white students and Negro students should go to the same schools?" In 1942, 40 percent of white Northerners answered, "same schools." By 1963 that figure had climbed to 73 percent. During the same period, the ratio of white Southerners saying "same schools" climbed from 2 percent in 1942 to 34 percent in 1963. Overall, in 1963, 63 percent of the white people sampled felt that whites and Negroes should attend the same schools. As Professor Thomas F. Pettigrew, one of the Conference consultants, observed, "White opinions on school desegregation have undergone extremely significant alterations throughout the country in recent years—far greater alterations than commonly recognized."

It is high time that these alterations be reflected in official school policy. American education must catch up with American life and American law. The citizens of this Nation demand that it do so, and they look to teachers and principals and superintendents to lead the way.

As educators, there can be no doubt in our minds that segregated education is inferior education. The wisest minds in our profession have joined the Supreme Court in making that clear. What is sadly lacking is the clear public expression of these facts of our professional life. The educator must speak out and he must act. He must help parents understand that all-white and all-Negro schools harm both races. He must exercise his responsibilities for leadership, forthrightly challenging those who would deny the constitutional requirement of equal educational opportunity for all.

In the face of this most crucial issue in American education, the professional educator cannot remain silent.

New Directions

Forces and Movements in Secondary Education

In summarizing the forces for change that have been exerted upon secondary education, Alan C. Green identifies four categories of concern: numbers, knowledge, society, and money.

CONTEMPORARY EDUCATION: CONCERNS AND DIRECTIONS *

Alan C. Green, Editor

American education today is characterized in very different terms, depending on the individual being questioned and his background. For some it is a period of excitement and dramatic change, while for others it is a period of disenchantment with the past and pessimism regarding the future. Some persons see little evidence of educational development in proportion to other areas of society, while others are concerned by the swiftness and magnitude of change in education.

American education is, in fact, characterized by a lack of consistency. There is change, but the quality, magnitude, and direction of the change vary a great deal from region to region, from district to district, and from school to school. Financial support, breadth of opportunities and quality of program also vary widely; in some places, change is a mere ripple, while in others it is a great wave.

However, there are some forces being exerted on each part of the educational system. The magnitude and direction of the forces vary, but always the origins are in one or a combination of concerns which face, or need to be faced by every board, administrator, teacher and taxpayer in the country. These concerns can be identified in terms of numbers, knowledge, society, and money.

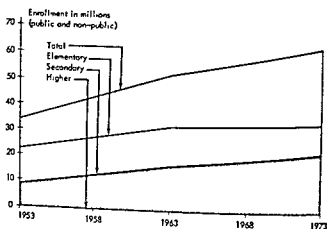
FIRST CONCERN: NUMBERS

With an increasing population there are more students to attend our schools and colleges than ever before, and more significantly, a larger percentage of this population is attending school than before. Not only are there more children, but more persons of all ages are continuing through higher education and beyond. The future indicates still greater numbers.

"If we try to look ahead 10 or 15 years, considering the present acceleration of change in education, it seems clear that by 1970 or 1975, people will have accepted the idea of a continuous school, not only in terms of a nongraded school, but a school that runs all year round, the way a post office or a supermarket does. They will not go through school—they'll go

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Enrollment in Millions (public and non-public), 1953-1973. (Source: Alan C. Green (ed.). *Educational Facilities with New Media*, 1966, p. A-6. Copyright 1966 by the Center for Architectural Research, Rensselaer Polytechnic Institute. Published by the Department of Audiovisual Instruction, National Education Association. Reprinted by permission of the Department of Audiovisual Instruction, National Education Association.)



to school. They'll start earlier and will finish later. They'll go whenever they're ready, and they will have guidance available that fits their age and stage of development."

Classroom teachers seem to be in short supply (although there is debate on this point) and highly experienced, highly qualified teachers are rare (there is no debate on this). The supply of good teachers has not kept up with the demands for their services, and the rewards to the teaching profession have not been commensurate with its significance in society.

The construction of school buildings has not kept pace with the demands for additional space, not to mention keeping up with the need for replacement of obsolete facilities. Our more stable urban centers generally have sufficient schools, but of poor quality. Our suburban, fast-growing areas are simply short of school buildings of any type.

It's been noted that education is fast becoming the country's "largest industry." With bigness come not only opportunities for greatness, but also opportunities for ineptness, sluggishness, and resistance to change.

SECOND CONCERN: KNOWLEDGE

We know more about more things today than we ever knew before, and we are accumulating this knowledge at a far faster rate than we ever have in the past.

With such a body of knowledge accumulating at such a rapid rate, no one can be universally educated. Generally, to find one's role in life requires accumulation of specialized knowledge in one particular area.

THIRD CONCERN: SOCIETY

Education is becoming associated with national survival—social and cultural as well as physical. Where once people were passive about education, they are now alert to its role in society. Or to put it another way,

"The school is the institution in which democracy has the best chance of becoming conscious of itself. The fundamental problem is one of developing the kind of institution that combines the degree of individual freedom and initiative which is necessary for progress, with the degree of social cohesion that is necessary for survival."

Educational concerns are no longer confined to the community or even to the nation. Education is one means being employed to assert the world's undeveloped and developing areas. In fact, after freedom, it is the primary need of society in the contemporary world.

The talents of many men are in competition with the capabilities of new machines and the techniques of automation. A man's skills, his training and education, and hence his livelihood, may become obsolete during his lifetime. Society demands that education provide job training as well as a means of fulfillment during expanded leisure.

"I predict that within the next 25 to 50 years maybe 20 percent of the people are going to be able to do all the work that's needed, which means we'll have on the one hand this rapid explosion of knowledge, and on the other hand, the elimination of a lot of work. So I think that we are going to have to develop a non-work ethic to replace the old notion that work is good and everybody ought to do it; and in its place we will have to come up with the notion that self-fulfillment is good."

Where quality and character of education was once a local matter, populations are now too fluid and too mobile to permit inequities in educational opportunities. A child may spend his fifth grade in the northeast, his sixth in the west, and seventh grade in the south; he should not be handicapped by this movement. Further, this mobility of population can create sudden pressures and crises at the local level where the final responsibility for providing an education lies.

As cities grow, students and schools become concentrated and centralized, reducing the opportunities for individual development and increasing the effect of poverty and deprivation.

FOURTH CONCERN: MONEY

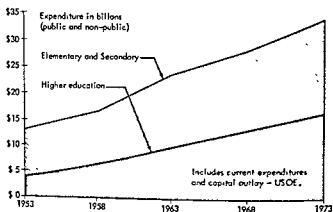
As the educational system becomes larger and more complex, the costs of developing and operating it require a larger percentage of federal, state, and community resources than in the past.

The school was once one of the major recipients of community funds. Now many other demands are made by society and government. From national defense to space exploration, the competition for funds is intense.

Education as a dynamic function of society creates obsolescence within its system. More money is required to not only maintain the educational system, but to rejuvenate and revitalize it.

These, then, are the concerns of contemporary education; it is the

Expenditures in Billions (public and non-public), 1953-1973. (Source: Alan C. Green (ed.), *Educational Facilities with New Media*, 1966, p A-8. Copyright 1966 by the Center for Architectural Research, Rensselaer Polytechnic Institute. Published by the Department of Audiovisual Instruction, National Education Association. Reprinted by permission of the Department of Audiovisual Instruction, National Education Association.)



response to these concerns that gives direction to the educational system of the country. The detailed translation of these responses into curricula, methods, media and organizational patterns in turn sets the needs for school buildings.

In response to these concerns there are several discernible directions in education today. Since education is still a local matter, all these directions are not equally apparent everywhere. To some degree, however, directions in quality, efficiency, and individualization are found in the mainstream of contemporary education. Some may feel that these, if any, are also the objectives of education.

A DIRECTION: QUALITY

- Education is providing learning opportunities of greater scope and in greater depth than ever before.
- Schools are educating for the understanding of principles rather than facts in order to develop a thinking population prepared to spend the rest of their lives learning.
- There is recognition of the need to develop esthetic experience in order to broaden our cultural base and to enrich individual lives.
- Education is assuming an obligation to treat formal schooling as a beginning rather than a terminus; continuing education is becoming a part of our daily lives. This will aid in solving problems due to technological obsolescence, leisure, and old age.
- Instruction is now giving attention to techniques and materials for more effective presentation of facts and experiences in order that each segment of learning be valuable and rewarding.

A DIRECTION: EFFICIENCY

- Education is developing more efficient instructional processes to enable bringing more education to more people in wider range and in greater depth.
- There are increased efforts to improve utilization of expensive facilities and human talent.

A DIRECTION: INDIVIDUALIZATION

Four points summarize the direction of education with respect to the individual:

- Encouragement of individual initiative, responsibility and motivation, so that learning becomes person-centered rather than people-centered.
- Development of individual interests and special abilities to allow the individual to establish his appropriate and useful role in society.
- Accommodation of differing individual capacities for learning as well as social and economic backgrounds within the total framework of formal education.
- Development of a sense of personal identification and participation in the learning process, as well as basic learning skills which may be applied in personal learning and self-education.

Others have identified these directions by saying, "The role of the school then becomes, in effect, a learning center, a warehouse of knowledge, a central storage bank for pupils to come and grow as tall educationally as their own potential and their own abilities permit."

"I believe we're all concerned with the present system of education that represents something akin to Detroit's mass assembly line. I don't believe it's anything like that which was conceived by our forefathers, who were trying to plan an educational system to develop people for a country that respected individuality—to train people to grow up as great individuals and to pursue knowledge."

From Concerns and Directions to Innovations

The concerns and directions presented in the last selection lead to the necessity of inducing change within the school systems. Dwight Allen believes that

change is not a one-step process with a termination point, but a continuous process of identifying alternatives, examining and testing them, and making alternatives in new forms. He says there are three kinds of innovations: (1) Those consisting of genuinely new ideas and approaches to existing problems, (2) Those made up of new technologies that offer possibilities heretofore not feasible, and (3) Those arising from new needs and demands on the educational system because of social, technological, and cultural issues that lead to innovations.

INNOVATIONS IN ELEMENTARY AND SECONDARY EDUCATION*

Dwight W. Allen

If we were to have a national suggestion box labeled "elementary and secondary education," the chances are that it would be filled to overflowing. Some of the ideas finding their way into the box would be old proposals cast in a slightly new light. Others would be fresh and unique. Many would be trivial, some important. Some would support each other. Still others might be in conflict. The suggestion box symbolizes our dedication to innovation, a distinctly American characteristic for accepting new ideas from wherever they may come.

THE PROCESS OF INNOVATION

Innovation in education is not a one-step process with a termination point. It is a continuous evolutionary process of identifying alternatives, examining and testing them, and making alternatives into new forms.

The range of alternatives to be considered for improving education is wider today than ever—"new" proposals abound. Of greater significance are the methods used for assessing their worth.

Three kinds of educational innovations may be identified:

1. *Those consisting of genuinely new ideas and approaches to existing problems.* A new perspective often presents new alternatives. Limitations are often no more than a lack of imagination. For example, it is assumed that the students should be under constant supervision while they are at school; yet, when school is dismissed they often are on their own for several

* FROM *Contemporary Issues in American Education*, consultant papers prepared for use at The White House Conference on Education, July 20-21, 1965, Washington, D.C., pp. 125-131. Published by the Office of Education, U.S. Department of Health, Education and Welfare. Reprinted by permission of the Office of Education, U.S. Department of Health, Education and Welfare.

hours, particularly as they reach high school age. New proposals for individual study suggest that students should be given the opportunity to demonstrate their ability to accept increased responsibility as one of the major goals of learning.

2. *Those made up of new technologies which offer possibilities heretofore not feasible.* One example is the use of computers to give us new information on which to base more sophisticated decisions.

3. *Those arising from new needs and demands on the educational system* due to social change, merging scholarly insights, cultural invention, altered perspective on scientific and technological developments. No longer, for example, can we prepare students for jobs and responsibilities that are clearly understood, well defined, and stable. Nor can we assume that many people will spend all or most of their lifetimes in the same place.

Educationally innovative efforts today are too often isolated and fragmented. We need comprehensive frameworks within which they can be studied.

How can we examine the context of innovation? How can responsible educators and educational policy makers make valid decisions regarding individual innovations and systems of innovation? We must begin with the goals of education and examine proposed curriculum changes, new processes and alternative structures for their probable effects on these goals. The goals, themselves, must be subjected to scrutiny for they may have unintended results. For example, an increased emphasis on science and mathematics as a worthwhile educational goal may have unanticipated results in weakening the humanities curriculum unless the structure of education is changed to accommodate the new curriculum goals.

We will attempt to identify some of the elements in the uneasy balance of expedients that characterizes the current educational program. Not enough is known to propose solutions. Examining alternatives is therefore much more important. It is hoped that the following issues will provide a substantive basis for discussion.

NEW GOALS

Significant new goals for elementary and secondary education are emerging in this decade. For example: higher education for a greater proportion of the population; occupational choices in the national as well as in the individual interest; and commitment to an international community.

In the past, the goals of education have too often been stated as pious hopes and in vague generalities. In the past, goals have been like New Year's resolutions. This is no longer adequate. We are beginning to learn that goals must be tied specifically and realistically to what students shall be expected to think, to feel, and to do.

NATIONAL CURRICULUMS

Should the curriculum be locally or nationally determined? This debate often blocks any innovation at either level. Some skills, for example, in reading, writing, arithmetic, and social studies have long been common to almost all school programs in the United States. Other aspects of the curriculum belong uniquely to a local situation. For example, a school district near a mountain wildlife refuge may conduct an open-air laboratory, using the unique local resources to study ecology, provide the stimulus for creative writing activities, or engage in the study of geological formations. To deny an individual school district the right to develop its unique aspect of the curriculum would be as foolish as to deny the nation the right to be served by those agencies which are alone powerful enough to cope with national problems. The argument should shift to one of which parts of the curriculum can better be developed on a national scale, and which at a state and local level.

For some subjects a properly devised national curriculum could provide a program flexible enough to meet the educational needs of a wide variety of students. Because of a concentration of effort, these national curricula can be more effective than most locally devised programs. Local programs lack resources to build the individualized programs they seek to provide. It is unrealistic to think that a group of teachers, however dedicated and competent, spurred on by curriculum consultants, can, at a series of meetings at four in the afternoon, devise a curriculum as powerful as a national effort on which specialists in learning theory, academicians, teachers, administrators, professors of educational methodology, and others, as well as the most competent teachers, are available to spend years of concentrated study.

INSTRUCTIONAL SYSTEMS

In early times the teacher was the instructional system. With the invention of the motion picture projector, teachers, it was predicted, would be turned into little more than projector operators. These dire predictions of the obsolescence of the teacher, never realized, continue apace as new technologies roll off the assembly lines: programmed learning, video tape, and computer-based learning systems. Partisan enthusiasts (not necessarily those developing the technology) foretell the day when the teacher will be replaced by machine. Any teacher who can be replaced by a machine should be.

The teacher does not perform a single function called "teaching," rather he is in turn: lecturer, counselor, evaluator, questioner, stimulator, en-

courager, coach, listener, arbitrator, friend, critic, interpreter, helper, and judge, among others. No teacher can perform each of these functions equally well. Some may be better performed by the new technologies. The organization of learning as we now know it places undue emphasis on certain of these tasks at the expense of others. It is unlikely that each of these tasks should occupy the same time or that they are equally significant. Nevertheless, we are unable to agree on their relative importance or to determine the balance required for each student. The availability of machines only highlights the long present need for the development of more precise instructional systems. The problem is to render unto the machine those things which are the machine's, and to direct to the teacher those that are truly human.

PERSONNEL CONSIDERATIONS

Education is the concern of the entire society; education is not confined to formal institutions. Personnel of quality are in short supply in all segments of society's endeavors. How important it is to use the competences of all to the best advantage.

Society recognizes that the home is where the child gets his initial education. It is from this base of initial family training that all formal education proceeds. New proposals for an earlier beginning point for formal education for some children underline the importance of this initial education.

This is but one way in which education becomes the direct responsibility of the community at large. This responsibility continues throughout the fabric of community life. Industries train their workers to perform specific tasks. Mass media seek to cultivate audiences both shaping and reflecting educational values. As our society becomes more complex, there is need for higher levels of education in both the formal and informal structures. There is also need for more coordination between formal and informal education. More precise definitions are needed. Parents need to know what schools are teaching, and schools need to know the assumptions they can make. As instructional systems become more comprehensive, general policy makers will have less ability to monitor the specific instructional procedures; new criteria for evaluation will need to be developed, and new bases for collaboration worked out.

The most competent teachers should be called upon to perform only responsibilities at the highest level. Tasks that can be performed with a lower level of training and competence should be assigned to other staff members. The tacit assumption has been made in the past that all teachers are interchangeable parts.

Once a concept of teacher specialization is introduced, a number of alternatives become available. The beginning teacher is not required to

assume full professional responsibilities immediately upon completion of formal training. At present, the beginning teacher frequently gets the most difficult and complicated assignment and the most difficult students to teach. Teachers tend to promote themselves away from responsibilities for difficult teaching situations as they gain staff seniority. If levels of responsibility could be identified so that senior teachers would have genuinely different tasks to perform, this trend might be reversed.

Team teaching and cooperative teaching offer alternatives which create interesting challenges for senior teachers and provide for systematic assistance from less highly trained members of the instructional staff. We can no longer afford the meaningless luxury of having highly trained personnel performing tasks irrelevant to their training at the expense of having less competent personnel performing tasks requiring the highest level of skill.

THE SEQUENCE OF EDUCATIONAL OFFERINGS

Focusing attention on the individual progress of the child is important, yet organizing students by arbitrary grade level destroys many opportunities to deal with the unique combination of skills and accomplishments of any one individual. A non-graded approach overcomes much of this difficulty. No completely non-graded programs have yet been established at either elementary or secondary level, due partially at least to the difficulty in identifying concepts which must be taught sequentially as compared with those which are independent of other experiences.

Assumptions about sequence are not always valid. Physics is a 12th-grade course not because it depends upon 11th-grade science concepts, but only because 11th-grade mathematics is used in the problem sets which accompany physics. Some topics in physics obviously depend upon relatively advanced mathematical notions; most elementary topics do not. Geometry, traditionally a 10th-grade high school subject, has been successfully taught at various elementary levels. Questions of sequence are still relevant; just because you *can* offer a subject earlier or later in the curriculum sequence for any or all students does not mean you *should*. Some blurring of sequences has already taken place. Algebra is offered at an earlier age; reading is now commonly taught in the senior high school.

Sequence within subjects is inconsistent. Our goals almost always talk of "building and maintaining" skills in the various subjects. Yet, especially at the high school level, we often have a "stop-and-go" curriculum. In mathematics, for example, non-college students rarely study any mathematics after the ninth grade. There is no educational reason for this lapse; but present organizational alternatives demand that a subject be taught five hours per week or not at all. If curriculum sequences are to be more educationally valid, students must have the opportunity to study in each

major curriculum area each year, though for substantially differing times and in different arrangements, depending upon their interests and abilities.

INDIVIDUAL STUDENT ATTENTION

Individual attention diminishes through the elementary grades, reaches a low point during senior high school and college undergraduate years, and comes back to a level approximating the kindergarten degree of attention when a candidate reaches the final work for his doctorate. The assumptions which underlie this policy call for identification of the appropriate advisory relationship for teachers. These should be based upon educational considerations rather than organizational or administrative *de facto* relationships.

TIME

In the early development of education in our country the assumption was appropriately made that more education was needed. Yet *more*, in and of itself, is an inadequate basis for making intelligent decisions regarding educational offerings.

New conceptions of time are challenging the long established assumptions which have permeated elementary and secondary education. We now tend to organize school programs into rather arbitrary segments such as the school year, semester, course, and period. Too often we begin with units of time and then turn our attention to what will be placed within those units. It is appropriate to ask whether any such arbitrary time units should be identified at all. We should also ask whether all content at all levels should be taught to all pupils within a rigid, hardened time framework. Time can be easily adjusted to purposes if we think of it as a variable resource instead of a preordained absolute.

Other time facets should also be considered. The optimum length for a school day and a school year needs analysis. Different standards of open and closed campuses and set school hours could be developed. Schools might be opened for longer periods of time, but students, depending upon their experience, might not be required to come and go at set times.

FLEXIBLE SCHEDULING

To avoid limits on the curriculum because of time restrictions, new organizational concepts are being tried. Flexible scheduling has received considerable attention. It allows for different combinations of teachers and

students, provides for new dimensions in the development of individualized instruction, and encourages different levels of student responsibility in independent study. Greater variation in class size and period length is made possible. Instruction in large groups can be presented as appropriate; small groups of students can gather with a teacher for discussion; and individual students can practice or pursue ideas on their own with teachers available to help when needed. Length of class time, class size, sequence of studies, and the organization of instruction can differ for each subject and for each student. The impact of flexible scheduling has been primarily at the secondary level. Elementary schools are currently examining flexible scheduling alternatives: scheduling resource centers, instituting individual study time, and developing cooperative staff arrangements.

SELF-CONTAINED SCHOOL DAY

Our objective is to create a school day which provides a variety of learning experiences for pupils, contact with a wealth of ideas and materials, and a significant amount of personal encouragement from the teachers. By eliminating the assumption that homework is a necessary and desirable part of the educational system, thereby bringing individual work within the context of the school day, a closer monitoring of learning becomes possible. The discouragement of learning something wrong and having to relearn it can be avoided, and socio-economic differences which make it more difficult for certain groups of students to accomplish homework become less important. Students are no longer left to their own resources to understand a hastily explained assignment. Teachers are no longer limited to assigning individual work that requires only those resources which can be counted upon to be available at home. Perhaps the establishment of resource centers for individual and independent study at school and the provision of time within the school day for their use will eliminate homework entirely as an obsolete educational notion.

FACILITIES

Facilities are an integral part of present innovation. Issues here are permanence, adaptability, and aesthetics. The goal is maximum adaptability of facilities with minimum financial outlay. Often a combination of highly specialized facilities will provide for more educational adaptability than will multi-use facilities. Facility limitations discourage innovation. Current innovations call for facilities for individual study, teacher offices, open laboratories, and sites for different kinds of student research. Planning is also necessary so that facilities may serve diverse community activities,

summer school, adult education, and extended school days. Since programs will continue to change, we should plan facilities which will not freeze current programs in concrete and mortar.

Schools need to be planned which will accommodate new technologies. The role of programmed learning is not yet determined. In some instances, programmed learning has assumed the full burden of instruction in given course materials; in other instances it has been used to supplement teaching; and it has also been used as a remedial device. Similar experiments with computer-based learning will come soon.

FINANCE

The sources and amounts of financial support for the schools is not a concern for this panel. Of importance here is the expenditure of available resources. The emphasis has long been on annual "per pupil cost," how much money it costs to keep one pupil in school for one year. The description of a "learning unit cost" would be more educationally relevant. A "learning unit" would be defined in terms of *specific performance*. For example, "level one in reading" would include a specified level of performance in reading skills such as vocabulary recognition, reading speed, and comprehension. Research would indicate the financial resources needed to obtain that level of performance for students of different ability levels and educational experience. This cost would vary with alternative technological devices and under different instructional situations. Learning units would be independent of time. Some districts would elect to concentrate "level one in reading" into 15 months of instruction; other districts, perhaps with different circumstances, might elect to take double that time for most students. The time would also differ widely for individual students within each situation. The advantage of thinking of "learning unit cost" rather than annual "per pupil cost" is that it focuses on the level of learning, not the maintenance of children in school. Communities can make conscious decisions about the intensity of learning units they wish to support. This will provide a more direct basis for evaluation of needed financial equalization as a district can point to experience with student and community factors influencing comparative "learning unit cost."

CONCLUSIONS

Innovation in elementary and secondary education is not the property of any one group. School systems must have the freedom to innovate. State departments of education must develop legal and operational structures which encourage alternatives. Legislative bodies must make funds available

for research and experimentation. Communities must place more premium on exploration of new ideas and procedures. Teachers, administrators, educational innovators at all levels must be given the right to be wrong.

The following structure is suggested for discussion:

1. *Advanced research centers.* These centers would be analogous to the advanced research centers of a number of industrial complexes where study is not limited to the immediate practicability of ideas. Research staff would have a free run to investigate new ideas. Such research facilities need not be exclusively "laboratory oriented" but would include experimental schools providing real student and teacher populations available for the testing of innovations.

2. *Experimental application centers.* Innovative programs could be tested. Curriculum areas, school organization, staff use, time variables, administrative structures and other wide-ranging studies would be appropriate for such experimental investigations. These activities would be supported as specific areas of inquiry, but without consideration of practical restraints or economic considerations. The difference between the experimental application laboratories and the advanced research laboratories would be that the advanced research laboratories would not limit their staff to particular areas of inquiry whereas the experimental application laboratories would have a specific focus.

3. *Developmental centers.* These groups would be responsible for taking procedures and programs from the experimental centers and making economic determinations of feasibility, considering the training of staff for their use, and developing models of implementation.

4. *Dissemination centers.* Dissemination facilities would systematically provide for familiarization and adoption of innovation on a widespread basis.

Our part in the course of educational innovation offers exciting possibilities for responsible action. The contribution of each citizen is necessary if we are to continue in a democratic environment where freedom to grow is a major value. We are a part of the changing times, and we must learn to live with it, to direct it, and to gain from it. America has pioneered frontiers in mass education that have contributed substantially to the growth and maturation of our democracy. The emphasis has been on the education of all the children of all the people. But even as the physical frontiers have pushed into new dimensions, our educational frontier must be raised to an ever higher base of quality in education. The search for quality will demand approaches, techniques and systems as different from the tools of mass education as the ether of space differs from the rails of iron that bound together a new nation.

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The Changing Role of Secondary School Administration

Major concerns of authorities in secondary school administration as expressed by a data-seeking instrument were leadership, and the role and function of the secondary school administrator. The selections in this chapter have been divided into three categories: (1) Nature of Leadership, (2) Professional Relationships, and (3) Focus on the Secondary School Administrator.

Nature of Leadership

Theory for School Administration

One of the fast growing and crucial bodies of professional knowledge for the school administrator is that of Administrative theory. Up to the present time, the theory of administration has been based on collection of folklore arrived at through on-the-job-training of practicing administrators who have translated their experience into oral and written principles. The social scientists declare that an educational theory is capable of formation. Many of the scholars in the professional field of school administration have begun the formulation of such a theory. The following selection by the American As-

sociation of School Administrators was addressed to the superintendent, but it applies equally well to the secondary school administrator.

RESEARCH IN ADMINISTRATIVE THEORY *

American Association of School Administrators

While we have given considerable attention to the various devices or resources for in-service growth, we have not yet examined in any detail the material or content of the learning that schoolmen might be expected to acquire. It is the contention of this Commission that of all the many areas of knowledge in which a school administrator needs to keep up to date the most crucial, at the present time, is knowledge of administrative theory. This is especially true for most of the administrators currently in service, since administrative theory as a clear body of content is still in an early developmental stage. Furthermore, a number of different disciplines and subject-matter areas contribute to research in the field of administrative theory. This topic has been chosen by the Commission, therefore, for intensive examination in this chapter to show the factors which need to be taken into consideration in planning an adequate program of in-service development for school administrators.

A survey, which is reported in the later pages, was conducted to reveal the extent of concern expressed by school administrators about their knowledge of research in administrative theory. Stated differently, the survey sought to relate the in-service growth habits of school administrators to the evolving research in administrative behavior, and to weigh the concerns expressed by the superintendents about this particular topic. Acknowledging that the many, many parts of education, from the "new mathematics" to improved seating, are subjects about which the superintendent must be adequately informed, we sought only to determine the feelings of the school administrator about administration, and to examine whether his in-service professional growth included a study of research affecting the executive role.

IGNITING THE FUSE OF INQUIRY

Before reflecting upon the degree of concern possessed by school superintendents on the subject of research in administration, let us examine first

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FROM EMPIRICISM TO THEORY

It is astonishing that so much thinking and writing could have been perpetrated in so short a period. But the literature is already extensive. One central theme pervades the content. To those who have let it pass them by, the message may be broadly stated as follows: Up to and including the present time, school administration has been based upon empirical foundations; it has evolved as a quasi-professional apprenticeship or folklore, with the techniques and processes handed down from one generation to another, through the trial-and-error and the hard-knock pattern. The administrators are the practical, effective, get-the-job-done men who know what will work and what will not work, because they have tried the solutions available, or they know good men who have. Further, through skill and experience and prestige, they make things work, whether or not the same device might work for others.

The social scientists, on the other hand, declare that an educational theory is capable of formulation. This theory would systematize administration, giving a sense of direction to what is now guesswork. The scientist asserts that a cause-effect formula is attainable, as in physics and chemistry. He does not claim this theory is yet at hand, but he is hard at work searching for it. His position broadly stated is that a set of principles can be conceived which will produce known, predictable results from given administrative behavior.

Even more crudely stated, the situation can be likened to the airplane bush pilot of the 1920's who, without instruments, flew his craft by the seat of his pants. Seat-of-the-pants flying was successful, right, and good for the aircraft being flown at the time. Furthermore, there was little else upon which to rely. But the bush pilot now finds himself in the pilot's chair of a monstrous flying machine of untold power and dimensions. The social scientist tells us that there are buttons to push, levers to adjust, gauges to watch, beacons to reckon, and codes to decipher. He tells us that one cannot fly this craft by the seat of the pants, but that certain levers and gauges, when actuated, produce specific and predictable results in the performance of the craft.

ADMINISTRATION AND CHANGE

Another theme that threads itself through the literature is the inevitability of change in school administration, and the certainty that school leaders must not only change with a changing culture, but contribute to that change. This notion is not new to us, as it affects curriculum and the instructional program, but have we counted ourselves and our administrative beliefs

just what it is that we are or are not concerned about. Those who are familiar with Campbell and Gregg, *Administrative Behavior in Education*,¹ are aware of a field of exploration and scientific appraisal which began to take form over 10 years ago. As in any movement of national proportions, the swelling of interest in the role of the school superintendency did not come about all of a piece. A number of independent forces seem to have converged at roughly the same time to give prominence to the need for investigation. Among these were the following:

1. The Kellogg Foundation's "discovery" in 1950 that superintendents of schools were very interesting and significant people, resulting in the Cooperative Program in Educational Administration.
2. The formulation of the National Conference of Professors of Educational Administration in 1947.
3. The findings of the Graduate School of Business Administration at Harvard regarding executive role in fields not unlike school administration.
4. The group dynamics movement, as stimulated by The National Training Laboratory and the University of Michigan, and heavily espoused during the past 12 years or more by AASA's sister body, the Association for Supervision and Curriculum Development (NEA).
5. Armed Forces experimentation with leadership and personnel hypotheses following World War II.
6. A new and aggressive search for executive leadership and the techniques for identifying it and developing it in business and industry.
7. And not least of all, our own silent and sometimes anguished admission that for all our confidence in our own know-how the superintendency is becoming more and more complex and less and less a piece to be played by ear, practiced though the ear might be. It is the condition that has recently been described by a very able superintendent: "The superintendency has become untenable."

When the convergence of these forces in time and place ignited the fuse of inquiry into the superintendency, professors of education began to speak to social scientists and, perhaps, even more singularly, to be spoken to by social scientists; and schools of education began to draw upon the resources of the schools of business and other schools in the university complex. Funds from the foundations were attracted. Educational administration, for the first time, came under the behaviorist's microscope, and we became the white mice of the social science laboratory.

¹ Campbell, Roald F., and Gregg, Russell T., editors. *Administrative Behavior in Education*. New York: Harper and Brothers, 1957, pp. 547.

most significant fact revealed in the tabulation of the strengths of a school system was the importance that teachers attach to good administration. Harap noted that the administrator tended to overrate the degree of good morale of the teachers under his supervision.

4. Testimony from the Associated Public Schools System prods us to be wary of administrative hypotheses . . . based chiefly upon speculation or upon apparent success through personal experience. The item continues, "The Sequential Simplex is a statistical tool which assists one in gaining insights into the importance and influence of community forces and administrative arrangements to the school. . . . Once the Simplex is perfected it will be possible to test statistically many administrative hypotheses which up to this time have been left, of necessity, to speculation. . . . Once the Simplex is completed we will be able to give you a deeper and more meaningful analysis of your community, and with greater speed."⁵

5. Walter Crewson, associate commissioner in the New York State Department of Education, has stated recently, "The superintendent was originally viewed as a fine scholar, a man of letters, and a gentleman. As he evolved and groped toward maturity, the superintendent came to be seen as a local leader in educational matters—a wise judge of good education—a supervisor of teachers. As it became apparent that good schools depended critically upon community leadership, the superintendent began to emerge as a community leader, a local educational statesman. . . . (birth rates, more classrooms, tax rates) tended to divert and indeed to fragment the superintendent. Small wonder, then, that the local superintendency came to be a synthesis of salesmanship and managerial skills, to the corresponding exclusion and neglect of . . . instructional leader. . . ."⁶

6. Hollis Moore, in his skillful synthesis of the work of the several CPEA centers of the Kellogg Foundation, asks what differences in school administration have resulted from the expenditure of 5 million dollars by Kellogg, matched by at least equal investment of university staff and resources. "Or have we merely substantiated the hypotheses which were made at the start of the program?" he asks. "It will surprise no one who knows how slowly of new concepts become generally known or how qualified are the findings of research in educational administration to see that we have firmed up our convictions more than we have discovered new ideas. Yet, certain shifts can truly be observed in today's perceptions of a school administrator's function compared with those a few years ago."⁷

7. Referring again to Thompson: "Much has been written about the uses of theory in research, less about the potential contributions of theory to the training of future administrators. In my opinion, an adequate theory of administration would go a long way toward preparing students for change.

⁵ Associated Public Schools System, *Newsletter No. 3*. New York: the System, March 1959.

⁶ Crewson, Walter. *A Design for State Leadership in Instruction*. Albany, N.Y.: State Department of Education. (Mimeographed.)

⁷ Moore, Hollis A. *Studies in School Administration*. Washington, D.C.: American Association of School Administrators, a department of the National Education Association, 1957, p. 27.

among those things which must change as well? James Thompson states this well, referring to administration in general: "‘Good supervision’ of the 1920 variety in America was rooted in a firm paternalism in which fear-inspired discipline had a large role. The same supervisory behavior today is ‘bad supervision.’ Why? In part, I think, because the individuals being supervised today have more education, are better organized, and place higher value on human dignity."²

It is clear that those who have taken upon themselves the scholarly study of our profession agree that empirical administrative processes must give way to theory, and that we must not only be amenable to change, but that we must be its champions.

PIECES OF THE MOSAIC

Let us examine smaller pieces of the mosaic which is gradually being assembled by the social scientists and the professors of school administration. (And it is noteworthy that many of the observations are not identified exclusively with education, but indeed more likely originated in another field and were transplanted for our consideration.) We have taken a number of interesting extracts from the accruing evidence of the theorists, upon which we may ponder:

1. Talcott Parsons, sociologist at Harvard, states that decision making is not the absolute function of the executive. Veto, yes, but not decision. The technical expert (in our case the teacher) participates in the decision. He does not merely display alternatives for executive action. He is involved, responsible, he shares in the consequences. The executive is powerless to implement without the skills of the technician. He can only fire one expert and hire another.³

2. Roald Campbell of Chicago's Midwest Administration Center admonishes us: "... education, chiefly public education, is a built-in corrective for our kind of society. Only through general public enlightenment can the experiment we call democracy succeed. It seems clear that the administrator of schools charged with such a critical function needs to understand the nature of the charge, and he needs the skills necessary to mobilize people to implement such a concept."⁴

3. Henry Harap, *The Nation's Schools*, June 1959, page 55-57 reported an extensive nine-year survey on morale, conducted by Peabody College. The

² Thompson, James D. "Modern Approaches to Theory in Administration." *Administrative Theory in Education*. (Edited by Andrew W. Halpin.) Chicago: Midwest Administration Center, University of Chicago, 1958. Chapter 2, p. 22.

³ Parsons, Talcott. "Some Ingredients of a General Theory of Formal Organization." *Ibid.*, Chapter 3, pp. 46-47.

⁴ Campbell, Roald F. "What Peculiarities in Educational Administration Make It a Special Case?" *Ibid.*, Chapter 8, p. 172.

tices, the cautious recommendation of promising techniques, personal success stories, and lively anecdotes, all surrounded with the aura of common sense, and often purveyed by a more or less successful administrator. . . . It has not done much for the development of the subject."¹²

11. As a final extract from the literature, let us examine Dan Griffiths' definition of theory in school administration: "A good theory exists when there has been established a set of principles upon which action may be predicted. These principles . . . constitute a logical and consistent whole built about a single theme or a small number of themes. . . . As yet, there is no theory of administrative behavior which satisfies this definition. . . . A list of principles is not necessarily a theory. . . . A theory attempts to state in one general form the results of the observations of many different researchers. . . . A theory starts with [scientific] observations which have been made. . . . The observations must be in the form of facts."¹³

The selective overview of the literature of research in the theory of school administration may move you as it has moved us to reconsider our posture as "practical" schoolmen and listen with some respect to the theorists. We have by no means offered a comprehensive overview of the subject. We have simply picked and chosen, here and there, an interesting item from the vast smorgasbord of information available to us. It is worth noting, too, that all the writers and thinkers in this field are by no means johnny-come-latelys to the question, nor are they all by any means "alien" social scientists who have never confronted the "firing line." Many names of distinguished old friends in practical administration can be listed along with theorists Stogdill, Argyris, Simon, Griffiths, Getzels, Barnard, Guetzkow, and many others. We mention only a few to call forth the images of statesmen in our profession, who, notwithstanding their practical posture and experience, share these concerns about the evolving "science of administration"; Ernest Melby, Walter Anderson, Howard Funk, Samuel Brownell, Hollis Caswell, Francis Chase, Walter Cocking, Willard Elsbree, Van Miller, to name a few.

Characteristics of Leaders

It is presumptuous to tell a practicing administrator what personal qualities are needed to be successful. There is no single pattern or characteristic that describes a leader. The man, the task, the situation, and the process used all go toward building the elements of successful leadership. Because the situa-

¹² Walton, John. "The Theoretical Study of Educational Administration." *Harvard Educational Review* 25:169-78; Summer 1955.

¹³ Griffiths, Daniel E. "Toward a Theory of Administrative Behavior." *Administrative Behavior in Education*. Chapter 10, pp. 359-360.

4. Technical skill:
 - a. Competence and mastery of some field.
 - b. Teaching skill: ability to get ideas across to others, and arouse their enthusiasm.
 - c. Ability to obtain cooperation.
 - d. Ability to make others feel important.
 - e. Ability to organize, and to delegate responsibility.
 - f. Ability to express one's ideas clearly in speech and writing.
5. Imagination, and ability to face reality.
6. Traits of personality:
 - a. Modesty, combined with self promotion.
 - b. Friendliness, affection.
 - c. Social ease and grace.
 - d. Lack of snobbishness.
 - e. Tact. Combined with
 - f. Frankness and honesty.
 - g. Willingness to serve others.
 - h. Fearlessness in standing up for the right.
 - i. Sense of humor.
7. Traits of character:
 - a. Adaptability: lack of fear of the new, and willingness to experiment and try new things.
 - b. Integrity, sincerity, honesty.
 - c. Fairness and impartiality.
 - d. Courage and decisiveness.
 - e. Initiative.
 - f. Thoroughness.
8. Intelligence: meaning—curiosity, observation, open-mindedness, resourcefulness, ingenuity, originality, and the ability to anticipate problems.
9. Judgment.
10. Faith.

Leadership as Task-Oriented

Many studies have been made of the specific tasks of the school principal. These have also been many studies that show how the principal spends his time in relationship to these duties. Rather than present a detailed list of duties, which can be found through discussion with any principal, a brief summary of how principals spend their time is presented. These are appropriate footnotes for those who desire to study in depth in this area. A

tion or situations are each unique, only the man, the task, and the process will be described in this section on leadership.

It is true that all kinds of men are leaders. For every quality one might choose as being essential to successful leaders, one can find successful leaders who do not possess this characteristic. However, experts tend to agree that certain characteristics are more frequently found among successful leaders. This premise, and a list of such characteristics, are set forth by Boyd Lindop.

QUALITIES OF THE LEADER *

Boyd Lindop

One of the first and most obvious things to note about leaders is that they are cut to no single pattern, but vary to the widest possible degree in personal qualities and characteristics. There is no one characteristic or combination of characteristics making leadership inevitable, no single quality enabling the observer to say, "This man will be a leader."

The lanky height and rugged frontier honesty of a Lincoln can be countered by the cherubic chubbiness of Churchill, the shortness of Napoleon, and the denial of political and moral scruples of the highly civilized Machiavelli. The oratorical ability of a Demosthenes, a Churchill or a Roosevelt (Republican or Democratic) can be balanced by the dry New England brevity of Coolidge's "I do not choose to run."

The rise to power on force, violence, fear and hatred of a Hitler or a Stalin can be more than balanced by the influence of a sufferer from hatred as great as any the world has known—a sufferer who uttered a gentle "Father, forgive them."

For every single quality or characteristic one might list as an essential for leadership, and for every leader selected as an illustration, someone else might list a characteristic or quality almost directly opposed—and cite an equally or more impressive example.

From careful study of many leaders, however, experts would come close to agreeing that the best and most successful leaders exhibit many or all of the following characteristics or qualities—to a greater or lesser degree.

1. Energy, enthusiasm.
2. Confidence.
3. Sense of purpose and direction.

* FROM *School Activities Magazine*, February, 1964, pp. 175-181. Reprinted by permission of *School Activities Magazine*.

There is no standard that prescribes for a new principal the number of hours he will be required to spend each week. Each person is different in his work capacity and efficiency. Each position has its special requirements. However, there are numerous studies that show how he should distribute his time most effectively and what tasks are considered to be most important.

HOW THE PRINCIPAL SPENDS HIS TIME

There have been a number of interesting studies reported in which the many duties are grouped into categories of related items, and the amount of time spent on each category has been determined. A study by Davis in 1921,³ Billet in 1932,⁴ and Davis in 1953⁵ indicated that although principals spend less time teaching than formerly, they are still spending too much of their time in routine administration and activities and not enough on curriculum. Davis' study revealed that 73 per cent of the week of the participating principals was given to activities falling within five major categories of administrative duties: namely, the organization, administration, and improvement of the instructional program; administrative routine; the organization, administration, and improvement of the guidance program; community relations; and the organization and administration of the school staff. In view of the considerable time given to them, these activities might be termed the "key duties" of secondary school principals. Three of these major categories—instruction, guidance, and the school staff—relate rather directly to the learning program of the school.⁶

A detailed breakdown of how the California principals spent their time is indicated by size of schools. This study shows that there is a direct relationship between the size of the school and the amount of time spent on curriculum and instruction. The principals of small schools spent more time teaching, while principals of larger schools spent more time in curriculum and instruction, guidance, and problems of the staff. The same general trend as to how time is spent is reported by Oregon principals.⁷

³ Adapted from H. C. Davis, "Duties of High School Principals," Part I, 20th Yearbook, North Central Association, 1921, pp. 49-69.

⁴ "National Survey of Secondary Education," Bulletin No. 17, Monograph 11 (Washington, D.C.: U.S. Office of Education, 1932), p. 117.

⁵ H. Curtis Davis, "Where Does the Time Go?" *California Journal of Secondary Education*, October 1953, pp. 347-60.

⁶ *Ibid.*, p. 349.

⁷ Harold V. McAbee, "Time for the Job," *Bulletin of N.A.S.S.P.*, March 1958, p. 41.

conclusion that can be drawn from all of the studies is that the principal does not spend as much time as he desires or ought to spend in curricular improvement.

TASKS OF SECONDARY SCHOOL PRINCIPALS *

Glen F. Ovard

GREAT NUMBER AND VARIETY OF DUTIES

One of the most common complaints of secondary school administrators is that they do not have enough time for the job. Stated more appropriately—the functions they regard to be most important are not being performed as they desire. There is often a conflict between how they do spend their time and how they think they should spend their time.

As one examines the number and variety of activities performed by the principal, it becomes easy to understand why a principal is sometimes regarded as a "Jack-of-all-trades" or as a person who does "something for everybody."

TOTAL TIME SPENT ON THE JOB

As one studies the multitude of duties required of the principal, it becomes obvious that the principalship is extremely demanding in terms of the time needed for the job. A successful principal cannot arrive and leave with the students or the teachers. A national study of the secondary school principals of the nation reveals that over 75 per cent of the principals spent 50 hours or more on the job, 45 per cent spent 50 to 59 hours, 23 per cent spent 60 to 69 hours, and 7 per cent spent 70 or more hours on the job. At the other extreme, only 7 per cent spent less than 40 hours per week. The median work week was 54 hours.¹ The school day and the school year are extended both ways for a principal. Based on a study of 500 Pennsylvania principals, a principal can expect to spend 521.66 hours a year extra time over the regular school day for others—more than 13 weeks, or about three and one-half months extra time.²

* FROM *Administration of the Changing Secondary School*, 1966, pp. 16–20. Copyright ©. Published by The Macmillan Company. Reprinted by permission of The Macmillan Company.

¹ J. K. Hemphill, "Progress Report: A Study of the Secondary-School Principalship, Part II," *Bulletin of N.A.S.S.P.*, April 1964, p. 222.

² "The Study of the High School Principalship in Pennsylvania," *Bulletin of N.A.S.S.P.*, December 1953, p. 119.

Leadership by Rotating

The process of leadership has been presented in many different ways, but the most typical is that of democratic-autocratic school administration. For over a decade the need for democratic administration has been extolled to such an extent that many prospective teachers and administrators have reacted against the "cult." Transcending those advocates of a few years ago who wanted the principal to permit the group to make all basic decisions, the author of the next selection declares the principal obsolete. He advocates that teachers select their own leader, and that this leadership be rotated periodically.

ARE PRINCIPALS OBSOLETE? *

R. G. Des Dixon

There is something pathetic about those former European kings who exist on a diet of dim hopes and the memory of past power. So long as they stay in Monte Carlo we can accept them as storybook characters in a vestigial fairyland. It is when they go campaigning in the real world that they become pitiful and amusing. One is reminded of the die-hard blacksmith who pressed for the solution of traffic problems by the abolition of automobiles. Both the blacksmith and the ex-king can gather about them a handful of followers eager to solve twentieth century problems by returning to the good old days, but the fact remains—carriages and kings are obsolete.

HOW SHOULD A PRINCIPAL SPEND HIS TIME?

The detailed examination of the duties of the secondary school principal reveals how the time of the principal is spent. But an examination of duties does not reveal how the principal's time should be divided. Practically all the studies on this topic indicate that the principal spends too much time on managerial and routine duties and not enough time on curriculum improvement. There is general agreement that the principal is the key person in the improvement of instruction. There is further agreement that improvement and supervision of the instructional program should be his major concern. Downey indicates that it is this phase of secondary school administration that makes the principal's tasks unique. He states:

It is suggested that, in the case of the secondary school principalship, the order of priority that should be assigned to the various task areas is *exactly the reverse of the order in which they are listed above*. That is to say, finance and business management is the least crucial and calls for the lowest level of involvement; program developments and instructional leadership is the most crucial and calls for the highest level of specialized involvement. In fact, I would contend that it is *primarily the unique aspects of the secondary school principal's tasks in program development and instructional leadership that makes his position a specialized one in educational administration*.⁸

A good example of how lay persons, teachers, and administrators regard this important function is found in a study at Lehigh University in Pennsylvania. Based on an analysis of about two thousand statements from these sources, the first three duties of the secondary school principal were: (1) leadership in the professional improvement of the staff; (2) improving classroom instruction; and (3) building and improving the curriculum.⁹

In the Oregon study the actual time spent by principals on their various duties is compared to the time both Oregon principals and national authorities thought they should spend on these duties.

A study of these data further indicates differences between how time should be spent and how it actually is spent. Office routine, activity program, and teaching took approximately twice as much time, 53 per cent, as the principals, 27 per cent, or authorities, 21.5 per cent, thought should be taken on these duties. Supervision and improvement of instruction received only 12 per cent of the principals' time, whereas, in contrast, the principals thought that 22 per cent of their time should be devoted to this area, while the authorities called for 31 per cent.

⁸ Lawrence W. Downey in Donald J. Leu and Herbert C. Rudman, *op. cit.*, p. 130.

⁹ Pennsylvania Branch N.A.S.S.P., "The Study of the High School Principalship in Pennsylvania," *Bulletin of N.A.S.S.P.*, December 1953, p. 118.

THE STAFF ELECTS HEAD TEACHER

Our solution to the problem would be the election of a head teacher by vote of all staff members. Surely we can credit our teachers with enough sense to pick suitable people for the job. Experience seems to suggest that teachers know better than boards of education who among them should be promoted.

Suppose it is May. A special staff meeting is taking place at Millenium Secondary School. Before every teacher is a copy of the statement of qualifications submitted by each candidate for an administrative hitch. Any teacher who has taught full time throughout the present year at Millenium may offer himself as a candidate. If elected, he will hold office for three years on the Administrative Committee, called Adcom. Candidates have made their intentions known three weeks prior to the meeting and have circulated their statements of qualifications at least two weeks before, so that staff members have already had opportunities to consider and discuss the aspirants. All that remains is for each candidate to make an oral presentation to the staff and to be questioned by them.

Voting by secret ballot takes place one day after the special meeting. All teachers who have taught one year at Millenium and who have agreed to remain for the following year have the right to vote. Ballots are counted by the present Administrative Committee and the successful candidate is informed at once. Immediately thereafter the same information is made known to the entire staff. This clean and efficient method removes the torturing fears and delays of the traditional cloak and dagger method of promotion.

The newly elected member of Adcom will not officially take office until the following September but may sit in at meetings immediately in order to orient himself. As of September, he does his administrative chores for half of the day and teaches the other half. During the first year of tenure his duties are largely those of the traditional vice principal, that is, liaison between administration and students, though as a member of the three-man team he has a full voice in policy making. Since the title "principal" may carry connotations not applicable at Millenium, the title "dean" is used. Thus, our first year man is assistant dean.

In his second year he becomes dean and spends all of his time on administrative duties. He is chairman of Adcom and head of the school. As such he will represent the school to the community and to the Board of Education.

The dean holds office for one year only, and then, for his third year, becomes secretary of the Administrative Committee. Again he will spend half of his time teaching. As secretary he is responsible for keeping the careful files, important in a dynamic administrative system. At the same

This is in the wake of the group dynamics tidal wave. Of course, the group dynamics trend in school administration may not have become established as a concept in the public mind, so that the present community attitude may be a manifestation of lingering Sputnik fever—a searching for educational security in the methods of a less hectic past—rather than a reaction to group dynamics. In the case of teachers, however, it seems unlikely that the group dynamics trend can have been missed by many of them, so that, if teachers share this apparent willingness to return to autocratic control, one might suspect a reaction to the methods of group dynamics rather than a symptom of Sputnik fever.

Do teachers want autocratic principals? Ask them and they usually say no. Pursue the matter and they seem to reveal a longing for "leadership." They want the administrative reins held tightly, but they still want considerable voice as to the direction in which the educational horse will be driven. It is probably fair to say that teachers want to do away with misapplications of group dynamics rather than group dynamics as such. They have had enough of principals who seem to abdicate the leadership role in favor of "groupiness"; they are fed up with committees drenched in permissiveness but barren of leadership and accomplishment.

Apparently, then, both public and teachers are searching for something better in school administration. Currently, the public seems to fancy the autocratic principal, but this position is indefensible in a democracy. The teachers appear to want principals who can provide the human relations advantages of the group dynamics approach while eliminating the disadvantages and remaining withal a true leader. It would take a master gardener to trim all the thorns from the bush while cultivating the blooms of permissiveness. There are not enough masters in the educational garden who could do the job day in and day out for a lifetime. Sooner or later the blooms would get chopped away in an attempt to overcome the thorns.

Perhaps the "something better" in school administration will come with an entirely new approach. It may be that the office of principal, like that of king, belongs to the past. The schools of Switzerland are run without principals or headmasters. Teachers take turns being head teacher. Even such supervisory positions as exist (there are no inspectors or superintendents) are passed around among teachers. Under such a system, Swiss schools have come to rank with the world's finest.

From this European stronghold of democracy may come a cue for the next development in our educational scene, the teacher-run school. Simply having teachers take turns as head teacher would probably not satisfy our needs. We would fear the prospect of weak or dilettante teachers at the helm. The Swiss teachers are better educated (all academic secondary teachers must qualify for the doctorate) and apparently are all career teachers (there are very few women in the profession), so the rotation method appears to suit them.

Probably yes. Administrators in office for only three years are not likely to run out of energy and ride on past glory. Rather, they will go all out to prove themselves so that they may be re-elected. It is only for one year that a teacher serves as dean. Surely it is not too much to expect a man to tread the difficult path of democratic leadership for one year at a time. The ulcers should not develop that fast.

Though parents may be favorable to the autocratic principal at the moment because of a feeling that all is not right with education and because a certain sense of security derives from harkening to the past, it is quite likely that the democratic Adcom system could win them over. The idea of being voted into office has an appeal. Surely there is educational security in the knowledge that a man must produce or not be re-elected.

It might be argued that parents would become confused by the changing faces in school administration, but they are used to changes in municipal council, school board, and national government. In the long run Adcom would tend to keep the experienced people within a school. His reputation having been established, a teacher might remain with a given staff in order to be elected and re-elected to the Administrative Committee. In this way the community becomes acquainted with a continuing staff some of whom are at the helm at all times, rather than a continuing principal who, for better or for worse, remains in control.

Then too, if parents particularly like a certain dean they can let it be known and that man will be encouraged to remain and run again. By the same token, a dean of whom some parents disapprove will only be in office for one year at a time and the unhappy people will be relieved to see a new face come along automatically.

The question of continuity of policy arises. Quite likely the traditional principal will maintain a continuity, a sameness, throughout his tenure. But with only one member of Adcom retiring each year, surely the element of continuity is safeguarded. There is a difference, however, an important difference.

Perhaps the greatest indictment of the traditional system hinges upon this matter of continuity. A principal, once in office, has arrived. He is a made man. There are few opportunities for him to advance. Consequently his aim, conscious or unconscious, is likely to be to hang onto his piece of cake. Any idea likely to disturb the equilibrium is looked upon by the principal as a threat. Maintenance of the *status quo* is much safer than experimentation, even though progress will only come with the latter. Possibly as a result of this, education is often said to be fifty years behind developments in the rest of society.

Remove the principal, install Adcom, and the situation changes. Some members are likely to be younger than principals, so young ideas will have a chance. Since no one on the Administrative Committee can possibly remain there permanently, there will be no effort to protect a vested interest. An interest in progress will replace protection of the *status quo*. There can

time he acts as liaison between teachers and administration. The secretary has equal voting power along with the other two members of Adcom.

After three years in office, a teacher must return to classroom teaching for a full year before he can run for another administrative term. Since members of the Administrative Committee enjoy a certain prestige and are paid two thousand dollars above category, it is not uncommon for teachers to seek a second term. Then too, teachers who have served on Adcom at Millenium Secondary School are eligible for appointment to supervisory educational posts in Hypothetical Township. In fact, the School Board will consider applications for such positions only from teachers with Adcom experience in one of its schools. In this way the teachers have an indirect voice in selecting their supervisors. The teacher voice is further heard in top level administrative matters because the deans and secretaries from all schools in Hypothetical Township serve on an advisory council headed by the director of education for the township.

OK IN HYPOTHETICAL TOWNSHIP, BUT . . .

It is clear that teacher-run schools work very well in Hypothetical Township, but possible weaknesses will be pointed out by educators from traditional systems. Since teachers need only one year of service to be eligible as candidates for Adcom, a teacher in his second year of professional life might be assistant dean. With only two years behind him, a young man of, say, twenty-four, could become dean. The possibility exists, and perhaps it is wise to leave the door open to a young genius. After all, William Pitt the Younger was Prime Minister of Britain at age twenty-four. In practice, however, it is highly unlikely that a relatively inexperienced teacher would be elected to the Administrative Committee. Quite certainly, any staff of teachers about to vote an administrator into office would regard a considerable amount of teaching experience as an important qualification. Then too, five years or so of teaching experience could be made a prerequisite.

WILL IT PROVIDE STRONG LEADERSHIP?

Teachers from the traditional system will wonder whether or not the Adcom system can provide strong leadership while maintaining the advantages of the group dynamics approach. Obviously, the democratic aspect to group dynamics is at the heart of the system. The administration *is* the teachers. Even if a member of Adcom decides to become an autocrat, he can be outvoted by the other two members. Besides, he will only be in office for three years. The coming and going of members each year will also prevent the establishment of an autocratic administrative clique. The question then is, will there be leadership?

their worth under the Adcom system. It hardly needs mentioning that the system currently in vogue is not without its political intrigues and pressures too. A good many principals have polished apples.

Adcom may offer scope for gifted women in education. The present system allows few females to enter administration, even though there are more women than men teaching today. There are several reasons for this situation, a major one being that many women teachers do not remain in the profession long enough to qualify for administrative posts under the present system. However, because a woman spends only a few years in education does not mean she has nothing to offer in administration. Schweitzer did not have to spend a lifetime playing the organ to be recognized as great in that among other fields. Since Adcom does not demand that a teacher be a very long time in education, it is quite likely that more women would have a chance to contribute to school administration. Probably the men would weaken a little and put up with a woman dean for one year, whereas they might refuse to work for years under a woman principal.

What of the administrative genius, the brilliant principal? Would the Adcom system, by returning administrators to the classroom, stifle the development of a future Ryerson? Not likely. Genius has a way of making its own way. Such a man would probably spend two terms on Adcom and then be ready for promotion to upper level supervisory posts. In the meantime, because of the committee system, he would have been forced to rub off some of his brilliance on other Adcom members and the teachers who elected him. On the national scene we have survived quite nicely when brilliant leaders have been denied office at Ottawa because terms have expired and re-election has not been forthcoming.

Adcom may have weaknesses, but they are essentially the weaknesses which are at the same time the strength of democracy. Maybe it is time for educators who preach democracy to practice it. Adcom is worth considering. If carriages and kings are obsolete, perhaps principals are too.

Democratic Administration Clarified

It is demonstrated in the previous selection that the term "democratic administration" must be clarified. In the next selection, Francis Griffith sets forth six mistaken concepts of democratic administration. He indicates that democratic administration is not: a laissez-faire procedure, a means of guiding personnel to accept the administration's viewpoint or to avoid unpleasant situations, majority rule, absence of authority, or formality.

be little doubt that a teacher elected to Adcom will think in terms of "how much can I accomplish in three years?" Since teachers have a very considerable conservative streak in them, there is no danger of this enthusiasm going too far. Continuity plus progress will be the keynote.

ANOTHER FAULT OF TRADITIONAL SYSTEM

There is another indictment of the traditional system. Principals must necessarily become removed from the essential business of education—the students. Every teacher has heard a long-time principal drop a remark in all sincerity which shows, with startling certainty, that he is a generation out of touch with the student population. Since the Adcom dean is out of the classroom for one year only, it is impossible for him to become a stranger to student realities. As for the assistant dean and the secretary, they are half-time teachers. In other words, the new member of Adcom is eased out of the classroom in his first year by spending only half time on administration. All his efforts are administrative during his second year as dean. Then, during his third year as secretary, he is eased back into the classroom by teaching half-time.

This last argument has an opposite number. If on the one hand it is good to have administrators who retain familiarity with the classroom, on the other hand there may be advantages in having professional administrators do the important job of administration. Does a hospital administrator have to be a doctor? Does a school administrator have even to be a teacher, let alone one recently in contact with the classroom? The answer to the first question may be no, but the second question will probably get a universal yes. Perhaps the business administrator of a school system can well be a non-teacher but, within the school, the school-man is needed. If some credit is to be given to the trend toward specialization, then the question becomes, are principals likely to be more professional as administrators than Adcom men? The possibility of accumulating years of experience is clearly on the side of the principal, but the certainty of fresh blood is definitely on the side of Adcom. In the matter of training for administration, the two sides are equal. If summer courses in administration are required of principals, they could as well be required of Adcom candidates.

There may be some fear that the Adcom system would turn each school into a political arena with individuals and factions battling for office. This is doubtful. In the first place, teachers are largely interested in sound education and hence in sound leadership. They tend to be level-headed. In the second place, experience with the old system would suggest that many teachers do not wish to do administrative work. Probably the same few who now apply for promotion would be candidates for Administrative Committees, the difference being that more of them would get a chance to prove

vance of consultation. It does not mean adroitly manipulating persons to think and act as an administrator wants them to.

For example: A high school principal determined upon policies without talking them over with his assistant principals, chairmen, or teachers. He believed that his duty as a democratic administrator was to guide others into acquiescence. There was no real give-and-take in his conferences. Nothing new came out of them. He was not looking for new solutions or for a possible modification of his preconceived plans. His sole purpose was to make others gravitate to his way of thinking.

The gentle guidance of others into acceptance of a predetermined course of action is a perversion of democracy. Democratic group discussion is a procedure for hammering out truth, for testing the merit of proposals by submitting them to critical analysis, and for creative thinking.

Error 3: Democratic administration avoids the firm exercise of authority and insistence on obedience.

Some administrators confuse firmness with authoritarianism. They are reluctant to issue orders and to demand compliance.

Indecisiveness is not an essential of democratic administration. There is a world of difference between the guarded and legitimate exercise of power and its arbitrary exercise without consideration of the interests, abilities, and welfare of those affected by its use. No organization can be effective without direction from above and compliance from below. There must be ordered control for smooth functioning.

The reasoned and reasonable use of power is a far cry from authoritarianism. Authority is legitimately used when it takes into account the rights of those whom it affects and when it employs means appropriate to, and commensurate with, the ends it seeks to attain.

A successful administrator must be firm. He cannot discharge the duties of his office unless he coordinates and directs the activities of his subordinates. The higher his position, the fewer orders he has to issue, for a suggestion often has the force of an order; but whether he is at the top of an echelon or in one of its lower ranks he must exercise control, with due regard for each individual, if he is to run his school smoothly. Ever mindful of Lord Acton's dictum that all power corrupts, he must be constantly on his guard not to step over the line into autocracy.

He should expect his subordinates to comply promptly and completely, if not willingly. While his orders are being complied with, he should permit the expression of dissent and never interpret opposition to a policy as disrespect or a personal affront. He must be careful not to stifle independent thinking, look upon individuals as cogs in a machine, or make a virtue of blind acceptance.

SIX MISTAKEN MEANINGS OF DEMOCRATIC ADMINISTRATION **Francis Griffith*

Democracy is the most misunderstood term in educational administration. Many schoolmen do not grasp its limitations. Their mental image of democracy as applied to education is fuzzy, like a view seen through an out-of-focus telescope. In the name of democracy, as they misunderstand it, they justify their blundering, indecisiveness, and buck-passing.

Six mistaken meanings of education democracy are prevalent. They need to be swept away so that the true meaning of democratic administration can be perceived.

Error 1: Democratic administration is a laissez-faire procedure.

Democracy in school management does not mean autonomy for the classroom teacher or school principal. It does not mean that a teacher can do as he pleases in his classroom so long as instruction goes forward. It does not mean that a principal can follow whatever practices he chooses so long as his teachers grow in competence and his school operates smoothly.

A measure of freedom is desirable in teaching and administration, but it must be exercised in a framework of established policy and all school activities must be subject to inspection and evaluation. The administrator who allows his teachers to do as they please on the ground that he is being democratic is shirking his legal responsibility.

In a well-run school there must be statements of policy which all are bound to observe. There must be guidance, direction, and, when necessary, interference from above. A good school does not run by itself. Confusion is not an ingredient of freedom. Leadership and authority are essential.

Teachers respect a principal who makes and announces clean-cut decisions even when they disagree with them. They like the security of definiteness, as long as they have a chance to be heard before policies are promulgated and the right to advocate their modification or discontinuance after they have been put into effect.

Error 2: Democratic administration means guiding persons to accept an administrator's viewpoint.

Democratic administration is not an exercise in human engineering. It does not mean influencing subordinates to adopt a policy reached in ad-

* From *Phi Delta Kappan*, October, 1966, pp. 59-61. Reprinted by permission of *Phi Delta Kappan*.

Error 5: Democratic administration is a means of avoiding unpleasant decisions.

Every administrator faces at least one problem which requires an unpopular solution. A mature administrator will reflect on it thoroughly, discuss it with his associates and those affected, and after due consideration announce his ruling accompanied by a statement of his reasons therefor. He should not be concerned with the effect on his popularity. If he wishes to curry popularity, he should enter some field other than school administration.

How does an insecure administrator act when faced with a problem which has only disagreeable solutions? He usually turns it over to a committee, ostensibly for study and recommendation, but actually to get himself off a hook. Sometimes he rigs the committee's membership so that its recommendations are a foregone conclusion. When the committee submits its report, he accepts it and thereafter rejects complaints on the grounds that he has followed a democratic procedure and that the decision was not of his making.

When problems are important and complex, committees are indispensable instruments in school administration. But when committees are used to evade responsibility they negate rather than promote democratic administration.

Error 6: Democratic administration means the absence of formality.

A school in which every staff member is on a first-name basis with his fellow teachers and superiors is not necessarily democratic. A school in which the principal addresses everyone as "Mr.," "Mrs.," or "Miss" may be more truly democratic than one in which the principal backslaps his teachers, calls them by their first names, and discusses their personal affairs with them.

Democratic administration is not a matter of externals. It is characterized by a professional attitude, a spirit of mutual concern and helpfulness, and a willingness to work together toward clearly perceived and valued goals. It is decency in human relations. Formality and informality have nothing to do with it. Glad-handing, boisterous camaraderie, and other informalities typical of businessmen's service clubs do not make a school democratic. Sometimes they hide a benevolent despotism.

Every administrator needs to be aware of these six pitfalls. Democracy is a term which has been bandied about so much that it is assuming strange connotations. The beginning administrator, particularly, should realize that democracy does not mean abdicating authority, steering attitudes into a predetermined mold, or evading responsibility. He should also distinguish between democracy's trappings—voting, committee procedure, and informality—and democracy's essence, a respect for every individual.

Error 4: Democratic administration means majority rule.

Democracy was originally a political concept, referring to a form of government in which those in authority derived their power from the free consent of the governed as expressed through the ballot box. Voting, which is an essential part of political democracy, is not an essential part of educational democracy.

Educational problems cannot be solved by majority rule. An administrator's proposed solution may be sound even though his faculty considers it fallacious and unworkable. A majority's opposition may be based on ignorance, fear of change, or an incomplete knowledge of the elements in a situation.

For example: A large city high school customarily conducted midterm examinations each semester. No classes were held during the three or four days set aside for examinations. The principal believed that the loss of four days was not justified and that the amount of time spent in test construction, mimeographing, scheduling, and correcting was inordinate and wasteful. Instead of reaching a decision based on his own experience and judgment, illumined by the advice of competent staff members, he called upon his teachers *and students* to vote on the continuance of midterm examinations. As might have been expected, the lure of four days of freedom from class instruction impelled his teachers and students to vote for their retention. Their decision was founded on self-interest and incomplete knowledge.

A skillful administrator should always be receptive to advice and suggestion from every source, but he is under no obligation to follow it if it is at odds with his own best thinking. He must consider the general good rather than individual preferences.

He may, if he wishes, call for a show of hands at a faculty conference or committee meeting to guide him in his decision-making, but he should make it clear beforehand that the poll is only advisory and that the final decision will be his alone. If he is wise, he will only rarely call upon his faculty to vote.

Few educational matters are so urgent that they require immediate attention. For reasons of expediency an administrator may defer action when a poll shows widespread opposition to a proposal he favors. He may continue to try to convince his teachers and supervisors of the wisdom of a proposal, realizing that it will fail unless his subordinates are convinced of its validity.

An administrator who determines his actions by the votes of his faculty substitutes their judgment for his own. He abdicates his responsibility by following rather than leading.

As a consequence of his forced conversion to the precepts of the educational leadership cult, the school administrator is rapidly becoming immobilized, and the attainment of educational objectives is being jeopardized. Destructive negative, rather than constructive positive, feelings are being displayed by the teacher, and school morale is low. In general, conditions have so deteriorated that the public is demanding a new, forceful leadership, and theorists are examining leadership activity in the hope of discovering how to make it more functional. Such endeavors might well begin with a consideration of how the teacher and the school organization interact and the role leadership should play in guiding this interaction.

A teacher is a human being, a school organization a corporate body created to serve other human beings. Both are important. Both have needs that must be met by appropriate teacher behavior. The teacher personality describes how he meets his needs; the school organization postulates the role he must play to meet the needs of the school. An analysis of the needs of the teacher and the needs of the school, however, reveals a basic conflict between the behaviors called for to satisfy the demands of both. The behavior described by the teacher's personality to meet his needs may be at variance with the behavior prescribed by the school organizational structure to meet educational objectives. A compromise is called for, and this fusion of the two behaviors is called "organizational behavior." School leadership is basically concerned with the nature, origin, use, and control of the organizational behavior of teachers. It is responsible for the fusion process.

Because of the fact that behavior satisfying teacher needs is not always compatible with that demanded by the school organizational structure, conflict and frustration are likely to develop. These are hypothesized to grow more unbearable as a teacher matures, as he becomes subordinate in the chain of command, or as his task becomes specialized to the point of monotony. As conflict and frustration become more and more uncomfortable, the teacher may seek relief in several ways: he may resign, he may attempt to escape by climbing the administrative ladder, he may become apathetic, disinterested, and uninvolved, or he may just accept professional dissatisfaction and chase money or some other intrinsic rewards. In all events, his behavior will become more and more nonfunctional to the organization he serves. The inhibition of such behavior and its modification are tasks assigned to educational leadership.

The school leader may approach these tasks in several ways:

- (1) He may elect to favor the needs of the school organization and insist that the structure designed to best meet these needs be maintained. To do so, he must be able to influence effectively the opinions, attitudes, and behavior of teachers in line with the best interests of the organization. He must, above all things, have the power of

Reality Leadership—A Compromise

In response to the unusual and perhaps extreme plan in which teachers select a principal, the group-oriented process is a misguided philosophy. Both the teacher and the school organization must be served, and the goals of the two are not always in harmony. The principal can exercise directive leadership, permissive leadership, or reality leadership; but only the latter is really effective. Bartky says administrators should diagnose the entire organizational structure and the teachers—and then apply directive leadership when the needs of the school are being neglected and permissive leadership when the needs of the teacher are being ignored.

THE DEPRESSIVE STATE OF EDUCATIONAL LEADERSHIP *

A. John Bartky

INTRODUCTION

Educational leadership today is developing into a cult with its own standards of success and its own moral code of behavior. Neophyte leaders are initiated into the mysteries of this cult by schools of education, and practicing leaders deviate from its commandments at the risk of being excommunicated from the educational profession. Teachers are inclined to evaluate their leadership in the light of the cult's Holy Scriptures, and teacher organizations charge school administrators with unethical conduct if their leadership does not conform to the cult's moral code. Cultism has come to completely dominate the educational leadership scene.

The educational leadership cult is group oriented, and it emphasizes group process in its rituals. Its converts who become leaders shrink from exercising any dominance and hesitate to contribute their ideas lest they be suspected of trying to influence the group they lead. The group must be left free to decide everything for itself by a process of discussion and consensus. Devotees to the cult assume that a teacher group is autonomous and in no way obligated to the social environment, including the public. Hence, teacher decisions may be in opposition to those made democratically by the public. By concluding that the function of leadership is to serve the needs of teachers, the leadership cult tends to reduce the leader to the level of a domestic servant.

* FROM *The Clearing House*, November, 1963, pp. 131-135. Reprinted by permission of *The Clearing House*, Fairleigh Dickinson University, Teaneck, New Jersey.

That this occurs is evidenced by the armed forces, who insist upon maintaining their structure and who are eventually successful in internalizing it as a value in the eyes of their constituents. However, educational leadership does not have the sanction power of the military and cannot survive long periods of teacher conflict and frustration.

Nevertheless, directive leadership makes teachers dependent upon the leader, and it is possible that once they become accustomed to dependence, some of them, if kept in this state, will learn to contribute effectively. This may partially explain those schools where directive leadership is successful. Perhaps they had more than their share of teachers who prefer to be dependent.

Leadership cultists are prone to state that directive leadership is never to be desired, but their contention is not valid. Morse and Reimer, in a controlled field experiment, present evidence that production can be increased to a greater degree through a directive leadership than through a permissive one.²

Directive leadership is obviously functional in times of urgency or emergency, when immediate organizational action is demanded. Under such circumstances, a little teacher discomfort may be a cheap price for efficiency. Directive leadership is also necessary when a teacher is uncooperative and refuses to change his ways. In such instances, some conflict and frustration is often quite effective in encouraging him to modify his behavior. Directive leadership under the name of autocratic leadership may be an anathema to the leadership cult, but it often is the only effective leadership.

PERMISSIVE LEADERSHIP

A leadership approach specifically designed to combat teacher conflict and frustration with organizational structure is a permissive approach. This approach widens the tolerance limits of the organizational role. It is more democratic, more involving, more collaborative, and more teacher centered than the directive approach. Lippitt and White's operational definition of the democratic leader best describes the permissive approach. If we relate their definition to the school situation, we find that the democratic school leader:

- (1) Permits all teachers to discuss school policy formation. He invites participation in the decision-making process.
- (2) Encourages teacher discussion about future as well as present edu-

² N. C. Morse and E. Reimer, "The Experimental Change of a Major Organization Variable," *Journal of Abnormal and Social Psychology*, Volume 52, No. 1 (January, 1956), pp. 120-129.

organizational sanctions and personal competence. He must be in a position to exercise directive leadership. This form of leadership is discouraged by cultists, who sneeringly refer to it as "autocratic" leadership.

- (2) He may elect to favor the needs of the teachers by building the school organization in ways to avoid teacher conflict and frustration. To do so he must be group centered and skilled in the management of group dynamics. He must be devoted to the idea of participation and must have confidence in the power of the group. He must be able to exercise permissive leadership. This form of leadership is lauded by the cultists, who euphoniously label it "democratic" leadership.
- (3) He may elect to favor neither teachers nor organization and devote himself to the health of the *total* organization which embodies both. To do so, he must be able to diagnose a leadership situation and prescribe the proper leadership approach, which may be either directive or permissive. Argyris calls this "reality" leadership.¹

This paper will argue that effective leadership depends upon the establishment of the proper balance between the satisfaction of the teacher needs and the satisfaction of school needs. It will suggest that the choice of a leadership pattern is not a matter of favoring one or the other. Hence, it cannot advocate the cultist leadership that is exclusively permissive or the autocratic leadership that is exclusively directive. By discussing all three approaches listed above, it will demonstrate that reality leadership is the only rational approach to employ in educational situations.

DIRECTIVE LEADERSHIP

Educational leaders, as agents of the formal school organization, are often tempted to react to undesirable organizational behavior on the part of teachers, or try to inhibit it, by becoming more and more directive. They are invited to increase the degree of technically competent leadership by clarifying, redefining, or strengthening the school structure. They set up all kinds of "information," "education," "communication," and "human relations" programs to further this end. These actions, instead of reducing the fundamental cause of conflict and frustration, often augment it and create new causes. However, leadership may continue in its directive ways, hoping that the time will come when the teachers will adapt, and conflict and frustration will disappear.

¹ C. Argyris, *Personality and Organization* (New York: Harper and Brothers, 1957), p. 207.

sists such leaders tend to make value judgments, are critical, and do not accept poor co-workers. Additional research has found that too much emphasis on maintaining a friendly atmosphere can reduce a group's goal of achieving efficiency. Still others find that groups with little cohesiveness can perform as effectively as groups with much cohesiveness. One study, in attempting to evaluate a directive versus a permissive leader, found that women prefer the former and men the latter. Another study implied that a leader need not even conform to the opinions of his followers.

The question might well be asked, why did an educational leadership cult that favors permissive leadership develop when it is obvious that it does not always work? The answer lies in the following facts. Many educators are inclined to apply what are little more than leadership insights to specific problems as universal absolutes rather than foundations for diagnoses. Permissive leadership principles have become absolutes for cultists. Also, because they tend to apply human relations hypotheses, based upon a consideration of one isolated dimension of reality where hundreds intrude themselves, they are more certain of their findings than they have a right to be. Lastly, because the name "democratic" leadership is attractive and "autocratic" leadership is repulsive, what the former represents is accepted, and what the latter represents is rejected. Also, one who is in favor of the first and against the second seems to be in the same strategic position as one who is in favor of virtue and against sin.

Unfortunately for the welfare of education, the field of leadership behavior has developed by evolving extreme positions. Historically, first came the proponents for organizational needs, with their directive leadership approach. When they had exhausted its possibilities in reaction to the teacher conflict and frustration, they caused the emergence of the proponents of teacher needs and permissive leadership. As a consequence, school needs are now being neglected. However, sooner than swing back to directive leadership, an action demanded by the public and some teachers, let us permit the pendulum to rest close to a middle position. Let us adopt a reality leadership which asks only that we diagnose the whole organizational structure and the teachers and that we swing to directive or permissive leadership as the situation demands: directive when the needs of the school are being neglected, permissive when the needs of the teacher are being ignored.

CONCLUSION

We might conclude by presenting the following propositions as hypotheses for a leadership approach:

on Preventive and Social Psychiatry, Walter Reed Army Institute of Research, April, 1957.

cational activity. He does not try to keep teachers in ignorance of future plans.

- (3) Permits teachers to define their own job situation as much as possible. For example, teachers are encouraged to determine the way tasks are to be accomplished as well as the manner in which they are to be fragmented and assigned.
- (4) Focuses on obtaining objective facts relative to teacher problems. The leader tries to base any necessary praise or censure upon objective facts. He is never subjective.³

These admonitions have become the four commandments of the educational leadership cult. They are the ethical principles that form the basis for evaluating leadership. A school administrator is not presumed to be a leader if he does not conform to these ethical principles.

It is assumed, but not readily demonstrated, that permissive leadership ends in (1) increased teacher identification with the school organization, (2) greater group productivity whether the leader is present or not, (3) increased job satisfaction and teacher morale, (4) greater organizational flexibility, (5) fewer teacher complaints, and (6) less hostility, frustration, and aggression.

Permissive leadership is advertised by the leadership cultists as being the leadership favored by teachers as well as the leadership ending in the greatest productivity. Neither contention is universally valid. Permissive leadership is not necessarily universally favored because not all teachers are actively seeking the job satisfaction it promises, because not all teachers are anxious to participate in school decision-making, because not all teachers are seeking the psychological rewards promised, and because not all teachers do want to be independent of school administration. Some teachers become just as frustrated with permissive leaders as others do with directive ones. The claim that permissive leadership invariably leads to higher productivity can be challenged and disproved.⁴

REALITY LEADERSHIP

Recent research in fields other than education leads me to question whether there is one best way (as suggested by the educational leadership cultists) to lead teachers. Fiedler accosts the cultists with the statement that effective leaders do not even try to understand their followers.⁵ He in-

³ R. White and R. Lippitt, "Leader Behavior and Member Reaction in Three Social Climates," in Cartwright and Zander's *Group Dynamics* (Evanston: Row, Peterson, 1953), pp. 585-611.

⁴ Morse and Reimer, *op. cit.*

⁵ F. C. Fiedler, "Non-Fraternalization Between Leaders and Followers and Its Effects on Group Productivity and Psychological Adjustment." Paper presented at Conference

is either democratic or autocratic. Little attempt is made to define the meaning of the words *democratic* or *autocratic*. Staff participation in decision making is usually linked with democratic. Decision making by the principal without staff participation is often linked to autocratic behavior. Furthermore, a moral judgment is given each category. Democratic leadership is good. Autocratic leadership is bad.

When autocratic leadership is used to designate a person who makes a decision by himself, the assumption is often implied that the use of authority is undemocratic. Such thinking may lead to the conclusion that leadership and authority are incompatible in a democracy. However, the use of authority in a democratic society is not undemocratic.

A democratic school system, like a democratic government, must have someone responsible for the operation of the system. Where responsibility is assigned, authority to act must also be delegated. The authority to make decisions in the area of one's responsibility is not undemocratic, nor is it autocratic. The use of authority is necessary if the leader is to function in a democracy. The dichotomy of "democratic" or "autocratic" thus defined is unrealistic of the nature of administration and the essentials of effective leadership.

THE CONTINUUM OF ADMINISTRATIVE OPERATION

The principal is delegated authority to act in order to fulfill the responsibilities placed on him. However, he is not told how he should carry out these acts. The method of operation becomes part of his responsibility. If the method of operation disrupts the school, the program, or the staff, the principal will not measure up to his responsibilities. Both efficiency and morale are lowered. Thus the method of operation becomes a vital factor in the effectiveness of the school leader.

If one analyzes the many duties that must be performed by the principal, he soon reaches the conclusion that different duties may call forth different methods of operational techniques. Some practical situations are given below. It will be noted that the method of operation can vary greatly with the situation and size of school as well as with the inclination of the administrator. The examples of action taken are not intended to be inclusive. Many other alternatives could be listed.

SITUATION ONE

Friday morning as school commences, the cheerleaders request a short pep assembly prior to the game that is to be played on that day.

ALTERNATIVE OPERATIONAL METHODS

- A. The principal gives immediate approval or disapproval.
- B. The principal refers the cheerleaders to the vice-principal or adviser of student activities.

- (1) There tends to be a lack of congruity between teachers' behavior to satisfy their own needs and the behavior demanded of them by the school.
- (2) This lack of congruity can cause conflict and frustration which may end in nonfunctional and even destructive teacher action.
- (3) School leadership may circumvent and avoid this behavior either by directing conformance or by permitting a restructuring of the school organization.
- (4) If directive leadership does not end in more undesirable behavior, then it is the leadership approach to be employed. Otherwise, a permissive leadership is called for.
- (5) The balance between satisfying teacher needs and school needs is a delicate one. Hence, leadership can never assume a static posture such as that recommended by the permissive leadership cultists.

Independent and-or Group Decision-Making

Although Bartky clearly sets forth the problems of and the need for a compromise position between permissive and directive leadership, his proposed Reality Leadership does not provide sufficient guidelines for the practicing administrator. In the next selection Glen F. Ovard discusses methods of operation leadership. A dichotomy of autocratic or democratic administration is dispelled. A continuum theory of administrative operation is set forth with independent decision at one end of the continuum and group decision at the other end. The principal's method of decision-making will depend on the situation presented and the goals to be achieved.

Guidelines based upon sound psychological principles of when to use the independent decision-making process and when to use the group decision-making process are set forth.

CONTINUUM THEORY OF ADMINISTRATIVE OPERATION *

Glen F. Ovard

USE OF AUTHORITY IN A DEMOCRACY

A theory that is very popular today is that leadership must be democratic to be effective. A dichotomy is often set forth; namely, a principal

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METHODS OF OPERATION AND SITUATION TWO

The practical action taken by the principal again depends on previous experiences with such matters as well as the degree of time needed to repair the furnace. The condition of the weather becomes a prime consideration. The alternative that would be selected would depend on the condition present.

1. If consultation with the custodian and maintenance repair personnel revealed that the furnace could be repaired in a short time period, the first alternative would seem most practical.

2. If the repair problem involved more serious implications and if a policy or procedure for emergency dismissal had already been established, the second alternative would be practical.

3. If no policy or procedure had been previously in operation or if the majority of the students were bussed to school, the third alternative would probably be followed. Both students and parents would need briefing.

It should be observed that in each of these situations the principal must make the decision. There is no need to call the faculty together for group discussion. Although the faculty is directly concerned in their teaching role with the action taken, they cannot add any great contribution to the effective solution of the problem. The superintendent and the transportation supervisor could aid in an effective solution. The faculty would not consider the principal autocratic for making this decision by himself. In fact, they would expect the principal to make the decision. The primary concern of the faculty would be that the decision reached was communicated to them so they would not be shivering in doubt as to what they should tell the students.

SITUATION THREE

Several teachers indicate that there are too many students, teachers, and organizational officers requesting that students be excused from classes. The teachers do not know whether the students should be excused or not.

ALTERNATE OPERATIONAL METHODS

A. The principal could leave it to the discretion of the individual teacher to make the decision.

B. The principal could make the decision himself and thus set the policy.

C. The principal could refer the problem to the faculty for their consideration and decision.

METHODS OF OPERATION AND SITUATION THREE

1. The first alternative might be the most practical solution if policy and procedure had already been adopted and was being followed. The teachers might then be given the responsibility to make the decision. The

C. The principal suggests that they return for an answer later in the day (at some specified time) so that the principal can consult with (1) superintendent's office, (2) faculty or faculty committee, or (3) student body officers or adviser.

METHODS OF OBSERVATION AND SITUATION ONE

The practical action taken by the principal would depend on a number of conditions. Some of these conditions would be:

1. If the procedure used here is a regular procedure, established and recognized by the faculty and students, the principal could give immediate approval. The total faculty would consider it an affront to their time and person if they were invited in to discuss every minute decision.

2. Even though the procedure is a regular procedure, the principal might question the need for an assembly, or he might believe that this request is an afterthought that lacked careful preparation. Under these conditions he might refer the students back to the vice-principal or adviser in order to have assurance that the request should be honored. Under these conditions, the principal would not refer the decision to the total faculty for decision making.

3. If the school is new or under new administration and the policy procedure had not been determined or was not clear to the principal, he might well use this third alternative. He might even take an additional step and (at a regular faculty meeting) raise the question for faculty consideration. Action on a request of this type would affect the teachers and the teaching situation. Therefore, policy procedure could be discussed and adopted by the group. The principal could then exercise wisdom and judgment in the alternatives available to him when subsequent requests are made. The same procedure could be followed with the student council if it were recognized that a decision of this nature had been delegated to that body.

SITUATION TWO

The school furnace becomes inoperative on a cold day when students are in class.

ALTERNATIVE OPERATIONAL METHODS

A. The principal could consult with custodians and maintenance personnel regarding the amount of time needed to repair the furnace. He could hold students in class but permit them to get their coats and wraps as needed.

B. The principal might announce over loudspeaker that school is dismissed.

C. The principal could consult with superintendent and transportation supervisor to devise arrangements for a dismissal plan and expectancy of return to normal operation.

WHEN TO USE INDEPENDENT DECISION

An administrator should decide an issue himself when some of the following conditions are more important than all other considerations:

1. When the administrator cannot share the responsibility with any other person or group, he is solely responsible for the decision. Examples that might fall in this category are: recommendations that a teacher be transferred or not be given a contract for the next year, questions of morals and teacher effectiveness, and other problems that involve particular individuals.
2. When time is of greatest essence and the need for immediate action is necessary, independent decision becomes mandatory. Examples of this type might be: severe accidents to students or staff members and requests that do not permit time for group action made by the district office, staff members, public officials, parents, and students.
3. In carrying out policy that has already been defined and accepted by those responsible for making the policy, the principal often acts without further consideration. Examples of this type of operation might be: handling an unexcused absence or discipline problem, reporting teachers' absences from work, requisitioning supplies and equipment, handling school lunch money, and other managerial functions.

WHEN TO INVOLVE THE GROUP IN DECISION MAKING

An administrator should involve the group in making decisions when the following considerations are paramount:

1. When the principal holds the members of the group responsible for the action that takes place, the decision should be made by the group. Examples of this type of a problem might be: determining policy regarding excusing students from class, supervision of students during lunch hour, and reporting attendance.
2. When the morale of the group is seriously affected by the problem and its solution, the group should be involved in making the decisions. Some examples might be: methods to be used in supervision of instruction; interruptions of classes for announcements, excusing of students, and office business; and requests and demands made on teachers for supervision during noon hour, before and after school, and extracurricular activities.
3. When demands are made on the faculty by groups outside of the school organization which interfere with the normal teaching function, the group concerned should be involved in making the decision. Such demands might be made by community and state organizations for money drives

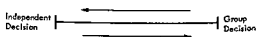
principal might review the policy with the teachers involved to make certain that the teachers fully understood the policy and their freedom and responsibility in regard to the policy.

2. The second alternative might be used as a basis of operation until the faculty could jointly arrive at a solution. It might also be used if no agreement could be reached by the faculty regarding proper procedure.

3. The third alternative would generally be the most practical if policy had not already been made. It would also be the best alternative if the teachers were raising questions about aspects of the policy presently in use. The faculty or the faculty's committee would want to be considered in this type of decision. As teachers who are holding class and thus being interrupted and as teachers making the requests for students to be excused in order to carry out their special programs, they are directly concerned with the adequateness of the solution. Both the effectiveness and morale of the teachers are involved. A superimposed mandate from above, even though adequate, would be rejected by many of the teachers. A policy decision by the principal would likely be considered autocratic behavior by some persons. The principal can give direction to a group discussion of this type. He can see that everyone is involved so that the final policy will more likely be accepted and practiced by all. And he can expedite discussion toward a more effective solution. However, in the final analysis, if a policy of this nature should be determined, the faculty ought to be involved in the decision. After the policy is made, the principal would see that it is carried out until it becomes evident that a revision is needed.

On the basis of the few examples given above, one can easily see that the principal might and does use many different methods in solving his leadership problems. Some of these problems are best decided by the administrator, some are best decided by the faculty, and some are best decided through joint action. The methods used in arriving at a decision might be placed on a continuum with independent decision on one end of the continuum and group decision on the other end. See Figure 1.

Figure 1. Continuum of Administrative Operation.
(Source: Glen F. Ovard. *Administration of the Changing Secondary School*, 1966, p. 40. Copyright © The Macmillan Company. Reprinted by permission of The Macmillan Company.)



A particular method for solving a particular problem might be anywhere on this continuum. Its exact placement would depend on the nature of the problem, those affected, the kind of information needed to solve the problem effectively, the size of the group, the stability of the group, the interpersonal relations of the members of the group, the age of the school, and the time of year (winter, summer).

Professional Relationships

Criteria for a Profession

In an adequate definition of a profession, the Educational Policies Commission of the National Education Association has set forth six criteria.

1. *A profession is based on a body of specialized knowledge.*
2. *A profession seeks competence in its membership.*
3. *A profession serves the needs of its members.*
4. *A profession has ethical standards.*
5. *A profession influences public policy in its field.*
6. *A profession has group solidarity.¹*

Code of Ethics for Administrators

Secondary school administrators perform many tasks, as has been shown. Most of these tasks involve working with people. The principal becomes involved in hiring and dismissing of personnel, in-service education of teachers, the organization of the staff, student-teacher-parent relationships and teacher-teacher relationships. The problems presented are frequently of the type that requires a code of ethics if the administrator is to operate on a professional level. The recently adopted Code of Ethics of the American Association of School Administrators is such a code.

POLICIES TO GOVERN THE ETHICAL PROFESSIONAL BEHAVIOR OF SCHOOL ADMINISTRATORS *

American Association of School Administrators

PREAMBLE

Public education in America rests on firm commitments to the dignity and worth of each individual; to the pre-eminence of enlightenment and reason over force and coercion; and to government by the consent of the

¹ Educational Policies Commission of the National Education Association and the American Association of School Administrators, "Professional Organizations in American Education." Washington, D.C.: The National Education Association, 1957, pp. 9-12.

* FROM "Policies to Govern the Ethical Professional Behavior of School Administrators" by the American Association of School Administrators, 1962. Reprinted by permission.

and essay contests, and pressure might be made by businessmen to have information and material included in the curriculum.

4. When questions of practice that require a definition of the functions of public schools are raised, the group should assist in making the decisions. Such questions are: requests for students to conduct community and school fund-raising projects and the problem of whether the schools should be holding institutions for potential juvenile delinquents.

5. When "pooled knowledge" can bring about a more effective solution than individual decisions, the group should be consulted. A clear distinction should be made at this point between "pooled knowledge" and "pooled ignorance." An effective solution should be based on knowledge of facts and information. Members of a group should have something to contribute to the adequate solution of the problem. Group action otherwise is ineffective.

6. When a high degree of acceptance of a decision is desired, participation by individuals concerned makes them more likely to accept the decision and put the decision into operation.

CONCLUSION REGARDING METHOD OF OPERATION

Administrative leadership, as designated by the methods of operation used by the leader, rests on a continuum from independent decision to group decision. How much independent decision and how much group decision to use depends on many factors, as previously discussed. It is not just a technique that makes autocratic or democratic behavior. Autocratic or democratic behavior is a symbol applied to a leader or a process based on the way people feel about the leader and the procedures used to solve problems. The personality of the teachers also determines how they react to the method of operation of the leader. A study by Cornell¹ in four school systems indicated that individual teachers react differently to administrative decisions and operational relationships. Teachers who are rated high on the Minnesota Teacher Attitude Inventory will do a good job in the classroom regardless of the organizational environment. Teachers who are rated low on the scale do not change behavior with a change in the organizational structure. The more socially and emotionally mature persons tend to participate more in policy formulation. Some teachers need a concentrated type of administration; others do not. The above-average teachers in professional attitude are most affected by lack of participation in policy making and decisions. Teachers low in professional attitude are, on the average, as satisfied with their participation whether it was in an "administrator-centered" or a "teacher-centered" school system.

¹ Francis G. Cornell, "Socially Perceptive Administration," *Phi Delta Kappan*, March, 1955, p. 223.

D. Never submits official and confidential letters of appraisal for teachers or others which knowingly contain erroneous information or which knowingly fail to include pertinent data.

E. Never fails to recommend those worthy of recommendation.

F. Is alert to safeguard the public and his profession from those who might degrade public education or school administration.

G. Seeks no self-aggrandizement.

H. Refrains from making unwarranted claims, from inappropriate advertising, and from misinterpreting facts about his school system to further his own professional status.

I. Never makes derogatory statements about a colleague or a school system unless he is compelled to state his opinion under oath or in official relationships where his professional opinion is required.

J. Exhibits ethical behavior by explaining and giving reasons to individuals affected by demotions or terminations of employment.

POLICY II

The Professional School Administrator Obeys Local, State, and National Laws; Holds Himself to High Ethical and Moral Standards, and Gives Loyalty to His Country and to the Cause of Democracy and Liberty.

The following examples illustrate but do not limit applications of this policy:

A. A legal conviction for immorality, commission of a crime involving moral turpitude or other public offense of similar degree shall be sufficient grounds for expelling a school administrator from membership in the American Association of School Administrators.

B. Affiliation with organizations known to advocate the forcible overthrow of the government of the United States is evidence of unworthiness of public trust. A person who is so affiliated shall not be permitted to become or to continue as a member of the American Association of School Administrators.

C. A professional school administrator, in common with other citizens, has a right and in many instances an obligation to express his opinion about the wisdom or justice of a given law. An opinion questioning a law, however, does not justify failure to fulfill the requirements of that law.

D. The ideals of his profession require a school administrator to resist ideological pressures that would contravene the fundamental principles of public education, or would pervert or weaken public schools, their educational program, or their personnel.

E. It is unethical to ignore or divert attention from laws which are incompatible with the best interests and purposes of the schools, as a way of avoiding controversy. Rather the professional school administrator will take

governed. Public schools prosper to the extent they merit the confidence of the people. In judging its schools, society is influenced to a considerable degree by the character and quality of their administration. To meet these challenges school administrators have an obligation to exercise professional leadership.

Society demands that any group that claims the rights, privileges, and status of a profession prove itself worthy through the establishment and maintenance of ethical policies governing the activities of its members. A professional society must demonstrate the capacity and willingness to regulate itself and to set appropriate guides for the ethical conduct of its members. Such obligations are met largely by practitioners through action in a professional society such as the American Association of School Administrators.

Every member of a profession carries a responsibility to act in a manner becoming a professional person. This implies that each school administrator has an inescapable obligation to abide by the ethical standards of his profession. The behavior of each is the concern of all. The conduct of any administrator influences the attitude of the public toward the profession and education in general.

These policies of ethical behavior are designed to inspire a quality of behavior that reflects honor and dignity on the profession of school administration. They are not intended as inflexible rules nor unchangeable laws. They serve to measure the propriety of an administrator's behavior in his working relationships. They encourage and emphasize those positive attributes of professional conduct which characterize strong and effective administrative leadership.

POLICY I

The Professional School Administrator Constantly Upholds the Honor and Dignity of His Profession in All His Actions and Relations with Pupils, Colleagues, School Board Members, and the Public.

The following examples illustrate but do not limit applications of this policy.

The professional school administrator:

A. Is impartial in the execution of school policies and the enforcement of rules and regulations. It is a breach of ethics to give preferential consideration to any individual or group because of their special status or position in the school system or community.

B. Recognizes and respects fully the worth and dignity of each individual in all administrative procedures and leadership actions.

C. Demonstrates professional courtesy and ethical behavior by informing a colleague in another system of his intention to consider for employment personnel from that system.

A. The school administrator will base differentiation of educational experiences on the differing needs and abilities of pupils, giving no preference to factors such as social status or other undemocratic or discriminating considerations.

B. A school administrator has an obligation to inform the board and the community of deficiencies in educational services or opportunities.

C. A school administrator resists all attempts by vested interests to infringe upon the school program as a means of promoting their selfish purposes.

D. A school administrator resists all attempts to exclude from consideration as teaching personnel members of any particular race or creed. He also resists pressures to employ teachers on the basis of the political, marital, or economic status of the applicant. The ability and fitness of the candidates for teaching positions are the sole criteria for selection.

E. A school administrator recognizes that the provisions of equal educational opportunities for all pupils may require greater or different resources for some than for others.

F. A school administrator is professionally obligated to assume clear, articulate, and forceful leadership in defining the role of the school in the community and pointing the way to achieve its functions.

POLICY V

The Professional School Administrator Applying for a Position or Entering into Contractual Agreements Seeks to Preserve and Enhance the Prestige and Status of His Profession.

The following examples illustrate but do not limit applications of this policy:

A. A school administrator is morally committed to honor employment contracts. He shall refuse to enter into a new contractual agreement until termination of an existing contract is completed to the satisfaction of all concerned.

B. A school administrator does not apply for positions indiscriminately nor for any position held by an administrator whose termination of employment is not a matter of record.

C. Misrepresentations, use of political influence, pressure tactics, or undermining the professional status of a colleague are unethical practices and are inimical to his professional commitment.

D. Advertising, either to solicit new school positions or to offer professional consultation services, is inconsistent with the ideals of the profession of school administration.

E. A school administrator refrains from making disparaging comments about candidates competing for a position.

F. A school administrator refuses to accept a position in which estab-

the initiative to bring about the reconsideration, revision, or repeal of the statute.

F. The professional school administrator will not withhold evidence or knowingly shield law breakers.

POLICY III

The Professional School Administrator Accepts the Responsibility Throughout His Career to Master and to Contribute to the Growing Body of Specialized Knowledge, Concepts, and Skills Which Characterize School Administration as a Profession.

The following examples illustrate but do not limit applications of this policy:

A. In addition to meeting the minimum standards required for legal certification in his state, the professional school administrator has a responsibility to satisfy the preparation standards recommended by his professional association, and has an obligation to work toward the adoption of these professional standards by the appropriate certification authorities in his state.

B. The school administrator has a professional obligation to attend conferences, seminars, and other learning activities which hold promise of contributing to his professional growth and development.

C. It is in keeping with the highest ideals of the profession for the administrator to support local, state, and national committees studying educational problems and to participate in such activities whenever and wherever possible, consistent with his obligations to his district.

D. The school administrator has a leadership responsibility for the professional growth of his associates which requires encouragement of their attendance at appropriate professional meetings and their participation in the work of local, state, and national committees and associations.

E. Concern for improving his profession, and for education generally, requires that the school administrator seek out promising educational practices and relevant research findings and that he share with others any significant practices and research from within his own institution.

F. The school administrator has a special obligation to contribute to the strengthening of his own state and national professional association.

POLICY IV

The Professional School Administrator Strives to Provide the Finest Possible Educational Experiences and Opportunities to All Persons in the District.

The following examples illustrate but do not limit applications of this policy:

B. The school administrator has a commitment to his position of public trust to resist unethical demands by special interest or pressure groups. He refuses to allow strong and unscrupulous individuals to seize or exercise powers and responsibilities which are properly his own.

C. The rank, popularity, position, or social standing of any member of the school staff should never cause the professional school administrator to conceal, disregard, or seemingly condone unethical conduct. Any and all efforts to disregard, overlook, or cover up unethical practices should be vigorously resisted by a school administrator.

POLICY VIII

The Professional School Administrator Does Not Permit Considerations of Private Gain nor Personal Economic Interest to Affect the Discharge of His Professional Responsibilities.

The following examples illustrate but do not limit applications of this policy:

A. A school administrator refuses to permit his relationship with vendors primarily interested in selling goods and services to influence his administration of the school system he serves.

B. It is improper for a school administrator to accept employment by any concern which publishes, manufactures, sells, or in any way deals in goods or services which are or may be expected to be purchased by the school system he serves.

C. It is improper for a school administrator to be engaged in private ventures if such endeavors cause him to give less than full-time concern to his school system.

D. This policy in no way precludes private investment of personal funds of the school administrator in ventures not influenced by his position in a given school system provided his own professional obligations are not neglected.

E. During the time of his employment the school administrator shall have no personal interest in, nor receive any personal gain or profit from, school supplies, equipment, books, or other educational materials or facilities procured, dispensed, or sold to or in the school system he serves.

F. It is a breach of public trust for a school administrator to use confidential information concerning school affairs (such as the knowledge of the selection of specific school sites) for personal profit or to divulge such information to others who might so profit.

G. It is inappropriate for a school administrator to utilize unpublished materials developed in line of duty by staff members in a school system in order to produce a publication for personal profit, without the expressed permission of all contributors.

lished principles of professional school administration must be seriously compromised or abandoned.

G. A school administrator does not apply for or accept a position where a competent special professional investigating committee endorsed by the Association has declared working conditions unsatisfactory until such time as appropriate corrections in the situation have been made.

POLICY VI

The Professional School Administrator Carries Out in Good Faith All Policies Duly Adopted by the Local Board and the Regulations of State Authorities and Renders Professional Service to the Best of His Ability.

The following examples illustrate but do not limit applications of this policy:

A. Adoption of policies not in conformity with the administrator's recommendations or beliefs is not just cause for refusal by the administrator to support and execute them.

B. It is improper for an administrator to refuse to work at his optimum level.

C. A school administrator has an obligation to support publicly the school board and the instructional staff if either is unjustly accused. He should not permit himself to become involved publicly in personal criticism of board or staff members. He should be at liberty, however, to discuss differences of opinion on professional matters.

D. If a situation develops whereby an administrator feels that to retain his position would necessitate that he violate what he and other members of the profession consider to be ethical conduct he should inform the board of the untenable position. In the event of his imminent dismissal the superintendent should request adequate reasons and if they are not forthcoming or if the situation is not resolved to his professional satisfaction he should report to the public.

POLICY VII

The Professional School Administrator Honors the Public Trust of His Position Above Any Economic or Social Rewards.

The following examples illustrate but do not limit applications of this policy:

A. To resist, or to fail to support, clearly desirable approaches to improving and strengthening the schools is unbecoming to a professional person and unethical conduct on the part of a school administrator.

C. In many situations and to many people in a community the superintendent is the living symbol of their schools.

D. The public entrusts both the day-by-day well-being and the long-range welfare of its children and of its school system to the superintendent and board of education.

E. The ultimate test for a superintendent is the effort which he makes to improve the quality of learning opportunity for every child in the schools.

F. In the long run, what happens in and to the public schools of America happens to America.

The Principal and Professional Negotiations

In the past few years, a serious problem has arisen for the principal—that of his role in professional negotiations. Teachers' organizations, the National Education Association, and the American Federation of Teachers have become more highly organized, competitive, and militant. These organizations are striving to be recognized as the sole bargaining agent of the teachers whom they claim to represent. Frequently the principal finds himself caught between the forces and demands. He also is caught halfway between the teachers, with whom he most closely associates, and the superintendent and governing board, with whom the teachers must bargain. Both conflicting groups claim his loyalties, and he is not sure to which group he belongs. In the struggle between the legal rights, represented by the governing board, and professional autonomy, represented by the teachers, the principal finds his role confusing. William G. Carr, executive secretary of the National Education Association, helps to clarify these issues.

THE PRINCIPAL'S ROLE IN PROFESSIONAL NEGOTIATION*

William G. Carr

On this, the 50th anniversary of your Department of the National Educational Association, it is a pleasure to pay tribute to secondary-school principals. The NEA as a whole is indebted to NASSP [National Association of Secondary School Principals] for its contributions in shaping the American high school. You are key leaders in the American school system, and are doing an outstanding job marked by inconspicuous gal-

* FROM *The Bulletin of the National Association of Secondary-School Principals*, April, 1966, pp. 45-56. Reprinted by permission of National Association Secondary-School Principals and the author.

H. A school administrator must be wary of using free consultative services from a commercial concern which may in effect be a skillful technique for promoting the sale of instructional or other materials in which that concern has a pecuniary interest.

I. A school administrator does not publicly endorse goods or services provided for schools by commercial organizations.

J. The school administrator should not recommend the appointment of immediate relatives to positions under his jurisdiction.

POLICY IX

The Professional School Administrator Recognizes That the Public Schools Are the Public's Business and Seeks to Keep the Public Fully and Honestly Informed about Their Schools.

The following examples illustrate but do not limit applications of this policy:

A. A school administrator has an obligation to interpret to the community the work and activities of the school system, revealing its weaknesses as well as its strengths. It is unethical for a school administrator to present only the favorable facts to the patrons of the district.

B. A school administrator maintains confidences or qualified privileged communications entrusted to him in the course of executing the affairs of the public schools. These confidences shall be revealed only as the law or courts may require or when the welfare of the school system is at stake.

C. It is proper for a school administrator to discuss confidential information with the board of education meeting in executive session.

D. A school administrator considers that those with whom he deals are innocent of any disparaging accusations until valid evidence is presented to substantiate any charges made.

OVERVIEW

High Standards of Ethical Behavior for the Professional School Administrator Are Essential and Are Compatible with His Faith in the Power of Public Education and His Commitment to Leadership in the Preservation and Strengthening of the Public Schools.

The true sense of high calling comes to the superintendent of schools as he faces squarely such widely held beliefs as the following:

A. The effectiveness of the schools and their programs is inescapably the responsibility of the superintendent.

B. Every act, or every failure to act, of the superintendent has consequences in the schools and in the lives of people.

is one of the major goals of the teaching profession today. The maintenance of satisfactory working relationships among various components of the teaching profession is fundamental to the achievement of this goal.

Page 1 of the *NEA Guidelines for Professional Negotiation* provides this definition of the process:

Professional negotiation is a set of procedures, written and officially adopted by the local association and the schoolboard, which provides an orderly method for the schoolboard and the local association to negotiate, through professional channels, on matters of mutual concern, to reach agreement on these matters, and to establish educational channels for mediation and appeal in the event of impasse.

Written profession negotiation procedures should contain certain basic elements:

1. The board of education recognizes the local association as the representative of the professional staff.
2. The local association uses professional channels in the negotiation process.
3. Representatives of the local association and the board of education negotiate in good faith.
4. A written document containing the matters agreed to is signed by the local association and board of education representatives at the conclusion of negotiations.
5. Educational channels are established for appeal in the event of an impasse.

Since professional negotiation was explicitly defined at the NEA Convention in 1962, progress in achieving written agreements has been remarkable. Approximately 1,000 local negotiation agreements have already been achieved. Eleven state legislatures have passed laws providing for negotiations between school boards and their professional staffs.

The teaching profession of the United States is now on the move. Teachers are determined to have a role in defining the conditions under which their services to the community may be provided. They insist upon a greater opportunity to apply their skills to the solution of human problems in the light of their first-hand knowledge of those problems. They have not lessened their determination to do an effective job in the classroom, but they also want the recognition which their training, experience, and skill abundantly justify. They think that better teaching and a better status for teachers are two sides of the same coin. The basic decision to secure and use written professional negotiation agreements for such purposes has been made in hundreds of thousands of minds. That decision will not be reversed. The teaching profession is using this means, through its own free and independent organizations, to advance the policies and the ideals which its

lantry. No occupation in the school system is more demanding in the variety of its requirements. Ambassador extraordinary to the public, mold of young lives, professional leader and close colleague of classroom teachers, often unhonored, but never without honor—the principal of the secondary school is the anchor man in education. When the recording angel makes his report of distinguished services, he will surely devote a substantial section of the *cum laude* list to this great group of public servants.

Thanks in large measure to your diligence and dedication, the secondary school today is a highly successful institution. The American comprehensive high school has become firmly established despite early prediction that it would fail or falter.

During the past decade American secondary schools were subjected to savage and unjustified attacks. National periodicals termed American secondary education a "carnival." National commentators called it "the weakest link in the educational chain." Every minor or isolated weakness was presented as typical. Overnight, without trial and without evidence, secondary schools were found guilty of permitting Soviet space exploration to take the lead over the efforts of the United States. The American people were first told that their high schools were inferior to those of Russia, next that they were inferior to those of England, then of France, then of Switzerland. Meanwhile, the restricted secondary schools of many European countries were struggling to emulate the best aspects of the American comprehensive high school.

But you have weathered these attacks with good humor and good grace. You did not allow the tumult and the misrepresentation to turn you aside from your controlling purpose, the proper education of all American youth.

Today, over 16 million youngsters attend the schools in your charge. Under your guidance, these young people are prepared for responsible citizenship, for useful employment, and for the greatest possible self-realization.

The National Education Association was vigorously working for that improvement of secondary education in 1911 when its Committee on the Articulation of High Schools and Colleges submitted its report. This committee was the forerunner of the NEA Commission on the Reorganization of Secondary Education that formulated the widely heralded "Seven Cardinal Principles of Secondary Education." As we all know, these principles became the cornerstone of our comprehensive secondary schools of today.

In 1927, your Association became a department of the NEA. It moved its headquarters, in 1940, to the NEA Center in Washington, D. C., where today it maintains one of the busiest and largest staffs housed there. Over the years, this cooperative relationship with other components of the teaching profession housed at the NEA Center has been advantageous to all concerned.

I would like you to know, on your 50th anniversary, that the entire NEA is proud of you, and extends to you its best wishes.

The establishment of satisfactory procedures for professional negotiation

stances by custodial and housekeeping chores, in the choice of their staffs, and in development of the school's curriculum. They need more freedom to select their staffs, and, in consultation with them, to shape the school program. The superintendent and the central staff, especially in large urban districts, are often so far removed from the daily operation of the schools that the principals need to assume greater roles in policy development.

Some people say that principals, by definition, cannot belong to local education associations, that they cannot participate in negotiations as part of a united team. To them I would say: It can be done, it has been done, and it is being done in hundreds of school systems throughout the nation.

In school districts in which competing organizations seek to represent the staff, some people say that principals must remain strictly neutral. The American Federation of Teachers in conjunction with the Industrial Union Department of the AFL-CIO is exerting every effort to divide us. Nothing would suit this purpose more effectively than to have teachers and administrators follow separate and conflicting programs.

The clearly-stated goal of the Industrial Union Department, AFL-CIO, is to take control of the teaching profession of this country by incorporating nearly two million of us in the labor movement.

In 1962, in Denver, I spoke to the NEA Delegate Assembly on "The Turning Point." I pointed out at that time the beginning of an effort by the Industrial Union Department to take over the teaching profession of this country. In the intervening years, substantial expenditures, both in funds and in the assignment of organizers from other labor unions for this drive has had some success in a few cities. Union teacher membership, which had remained static at around 40,000 for decades, has risen now to 110,000.

Owing to the efforts of NEA members and the state and local affiliates, this thrust has been blunted. But the campaign to absorb the teaching profession into the Industrial Union Department continues.

Believe me, the big cities are not the only places where the effort to unionize teachers threatens our effectiveness and the integrity of the educational process.

Teachers, principals, superintendents, and the citizenry at large will be profoundly affected by the outcome of the struggle to organize the teaching profession; none can afford the luxury of detachment.

Trade unions have played an important role in the industrial world. Union members owe their basic allegiance to the over-all labor movement and gear their policies to its requirements. Thus, the first objective of the United Federation of Teachers in New York City, as stated in its Constitution, is "to cooperate to the fullest extent with the labor movement, and to work for a progressive labor philosophy; to awaken in all teachers a labor consciousness and sense of solidarity with labor." Should the unions succeed in organizing teachers in substantial numbers, their link with the labor

members believe to be essential. It would be wise for schoolboard members, newspaper editors, state legislators, public officials, and other makers and leaders of public opinion to recognize the profound nature of this decision by the teaching profession.

Let me remind you of a few of the well-known but very important changes that have been occurring in the composition of the teaching force. They began to be noticed in the 1940's and have been increasingly evident during the last fifteen years. The current ferment in education can, in part, be directly attributed to these changes:

1. Teachers are better educated. The typical classroom teacher has nearly five years of post-secondary education—a dramatic shift from the once dominant two-year normal school training.
2. Teachers are more fully and effectively organized. Lacking power to improve school conditions by acting alone, members of the profession have turned to group representation in order to share in decisions affecting their conditions of service.
3. The teaching profession in all of its branches—teaching, supervision, and administration—is more insistent than ever on professional salaries to release educators from economic humiliations and moonlighting, and to provide conditions of work which allow them to operate at full potential.
4. The teaching profession has grown younger—on the average, that is. But young teachers, along with their more experienced colleagues, increasingly are impatient. They are not content to wait for old age. They want action. As youth has always done, the new recruits in the profession are questioning the values and procedures of their elders. They are willing to take chances if they think they can also make progress.
5. The teaching profession is witnessing a new emphasis in its organization. This new emphasis is on the strengthening of local associations. Two or three decades ago, *state* and *national* education associations began a rapid development with the addition of full-time staff and increased services. Today, great emphasis is being placed on the development of *local* education associations. The urbanization of the country is helping to promote that trend. Already some 65 urban associations have full-time executive secretaries.

These changes are challenging former procedures and methods of operation. They call for new approaches. One of these is professional negotiation.

Professional negotiation is as important to secondary-school principals as it is to classroom teachers, and for many of the same reasons. Principals, as well as teachers, must have greater opportunity to work as trained professionals. Principals have been and still are hampered in too many in-

there was a voluntary, free, self-governing association of teachers, unaffiliated and uncommitted to any other group. This is why I have wanted and now want to be of service to the NEA. Because freedom can only survive here if teachers are free—untrammelled and self-governing.

The principal, then if he values his professional freedom, cannot afford to be neutral when questions of teacher affiliation arise at the local level. This particularly pertains to staff elections to determine majority representation for the purpose of negotiation. Every staff member should be free to vote in a representation election. This is especially pertinent in cases where an all-inclusive organization is one of the choices on the ballot. No staff member should be disenfranchised on a matter of such importance, and no staff member should feel constrained to hide his true feelings of allegiance. It is pertinent here to quote from the booklet, *The Principal's Role in Collective Negotiations Between Teachers and School Boards*, which has recently been published by your association:

[NASSP] members have every right and privilege to comment on and criticize the program and activities of any and every organization which seeks to affect the policies and practices of public education. Principals and administrators will not waive that right because of the specious argument that this may subject teachers to unfair pressures.

Certainly, no staff member should ever be subjected to improper influence, either to join or not to join a particular organization or to vote a particular way in an election. But every staff member, regardless of position, should also feel free and be free to speak out on crucial issues as his informed judgment dictates. Those who believe in a free and united profession should be willing and able to speak in defense of their beliefs.

Turning now to the specific structure for local negotiations, we can point to three ways in which principals are currently represented:

1. Through comprehensive organizations that include classroom teachers, principals, and other certified staff members.
2. Through separate organizations, either negotiating independently of one another or negotiating together by means of a joint council.
3. Through non-participation in the negotiation process.

The third alternative, that of complete non-participation, is clearly unacceptable. No responsible group of principals would choose to sit on the sidelines while important matters of educational policy are being formulated. Nor would the negotiation process be as meaningful without the knowledge and insight that many principals can provide.

How, then, should principals be represented in negotiations? Beyond this question lies an even more basic one: the structure of staff organizations

movement would profoundly alter the character of American public education.

Here is an example of what I mean:

Last August, at its convention, the AFT directed its affiliates to protest to school boards purchasing school textbooks published by the Kingsport Press in Kingsport, Tennessee. An unresolved labor dispute of many years' standing continues in that plant, although the National Labor Relations Board has not supported the union position. The AFT distributed a blacklist of 170 education textbooks to delegates. In this very city where you are meeting, books and encyclopedias of unquestioned educational value are in the process of being denied to the youth in the schools. Neither principals nor teachers were consulted about the value of the books, the accuracy and scholarship of their contents, or their relevance to the instructional program. A decision concerning textbooks for the schools of Cleveland, Ohio, was determined by the failure of a typographical union in Kingsport, Tennessee, to gain its objectives.

Another example is furnished by an article appearing on the front page of the Albuquerque *Tribune* of October 16, 1965. It began with the following statement:

A fiery plea to educate the nation on the labor movement by capturing the classroom was made today to the 10th annual convention of the New Mexico State AFL-CIO at the Alvarado. Herrick Roth, president of the Colorado State Labor Council, told delegates the labor movement will not reach its ultimate in America until "union shop signs are hanging in every classroom."

How the education profession is to be organized is not merely a jurisdictional struggle. There is a significant difference between teachers organized in unions and teachers organized in independent professional groups. The independence of the teaching profession and even more vital, the independence of the educational process is at stake.

William Russell, former President of Teachers College, Columbia University, in explaining why he always responded to a request from the NEA with every resource at hand, said:

My father before me—and I in my time—traveled extensively throughout the world. We studied the educational systems of the countries we visited. We both wrote extensively in the field of comparative education. Here is the most impressive thing we learned from this study: Wherever education, free education, went down in the world, it was in a nation where teachers and education became an affiliate or an adjunct of big business, big government, big church, big labor, big political party, or some other powerful influence bent upon twisting education to its own ends. And we found, conversely, that wherever free, untrammelled, untwisted education existed or survived,

circumstances. Certainly, where a tradition of effective action by the local professional staff has been developed and is working well, the policy should be continued. Above all, principals must not be spectators when decisions are made about the course of education in their communities. They belong with their colleagues, in their professional associations. Inaction and disinterest separate, and alienate teachers and principals as surely as open hostility.

The relationship and roles of the members of the teaching profession brought about by formal negotiation procedures at the local level should not cause us to try to reweave the whole fabric. At the state and national levels, I see no major change required because of the negotiation process at the local level.

I need not list all of the cooperative endeavors at the state and national levels. Most of you in this auditorium are serving, or have served, now on a state or national committee along with other colleagues in the profession. You may be working on state retirement legislation, or serving as a contact in your state on federal legislation; you may be involved on the defense of a member of the profession through a professional rights and responsibilities commission; you may be working to improve the certification requirements in your state through a TEPS Commission; or you may be working on the improvement of instruction, using materials from NEA's Center for the Study of Instruction.

Two or three recent activities of the profession clearly illustrate the continuing need to remain independent and unified.

Example No. 1: A teacher in Paradise, California, was attacked by a rightist group because she was trying to develop the ability of her pupils to deal with controversial issues. At Halloween, the "trick or treat" parcels which the children collected were wrapped in little mimeographed pieces of paper containing a scurrilous attack on the teacher's integrity. One of the teacher's pupils carried a tape recorder in a hollowed-out textbook to class, with the apparent purpose of playing the tape later to embarrass her. The teacher decided to fight her detractors in the courts. Her colleagues in California and in the nation are supporting her through the California Teachers Association and the National Education Association. She is receiving the intangible but personally important support of fellow teachers, and the tangible and quite substantial support of funds to pay her expenses.

The strength of a profession is demonstrated by its ability to stand together in cases of this kind. Over the last decade and more, many administrators, including principals, as well as many teachers, have been similarly defended by state associations and by the National Education Association.

Example No. 2: In Oklahoma, this year, state funds alone are providing an average of about \$550 more per classroom because the profession throughout the nation spoke and acted in unison, by means of national sanctions in a crisis. In Utah, a year ago, the same thing happened. These movements

at the local level. Local affiliates of the National Education Association are free, under the Bylaws of the Association, to organize in the manner they deem most suitable to their purposes. While the NEA has no official preference for one type of local affiliate organization over another, evidence and experience clearly show that an inclusive approach to negotiations can operate successfully if all parties *desire* to make it so. However, individual segments of the organization should be able to arrive at important policy decisions free of the domination or undue influence by other segments. And the diverse needs and interests of various groups should be reconciled satisfactorily before negotiations begin.

Of the five statewide professional negotiation statutes enacted in 1965, three call for secret ballot elections to determine the negotiation representative (Connecticut, Oregon, and Washington). In all three states, the statutes call for participation of *all* professional personnel below the rank of superintendent in the elections.

The Florida statute, while not calling for elections, mandates all-inclusive membership in negotiating units.

The Connecticut statute provides for local determination of the negotiation unit. Prior to voting for the negotiation representative, a vote is held to ascertain whether the staff wishes to negotiate through a single, all-inclusive organization or through separate units composed of classroom teachers on the one hand and administrative-supervisory personnel on the other. This approach is sound, since it permits local preferences to control the plan to be followed in negotiations. In the vast majority of elections held thus far in Connecticut, staff members have voted to continue the all-inclusive type of association structure.

Since most negotiable items pertain to all professional personnel, no inherent conflict of interest is created by inclusive organizations. Even in the case of salary schedules, there is a tendency to include all personnel in a single structure, relating administrative-supervisory positions to the teachers' schedule by means of ratios. The situation here is somewhat analogous to that in the federal government, where all-inclusive employee organizations are frequently to be found.

If the all-inclusive membership concept does not or cannot operate satisfactorily in specific instances, alternative arrangements can be worked out.

I referred earlier to the NASSP booklet, *The Principal's Role in Collective Negotiations*. Implicit in the title is the assumption that there is a role for principals in the negotiation process. I agree with this belief. Professional negotiation enlarges the participation of all teachers in the formulation of school policies. Its aim is not to exclude anyone, but rather, to include teachers "in."

One cannot give pat formulas concerning the principal's role in professional negotiation. In the final analysis, the most appropriate pattern for negotiation should be left to local preference, based upon unique local

Focus on the Secondary School Administrator

Unique Function of the Principal

According to Lawrence Downey, the process approach to school administration is applicable to most administrative positions. All administrators are involved in decision making, communicating, coordinating, and evaluating. It is the unique task of both program development and instructional leadership that makes the secondary school administrator's function a specialized one in educational leadership.

THE SECONDARY SCHOOL PRINCIPAL *

Lawrence W. Downey

In the course of a few brief years—since educational administration first emerged as a scholarly field of study—students of administration have explored a variety of approaches to the subject-matter with which they deal. Some of these approaches have proven productive and are still undergoing refinement. Others have proven sterile and are now becoming obsolete. All of them, however, have contributed somewhat to the development of the field of study.

In retrospect, it would appear that each of these approaches emerged and took shape largely in response to a specific question—the question which, at one particular stage in the development of administration, was considered central to the phenomena under investigation.

At times the important question in the study of administration was thought to be: "What, precisely, is involved in the administrative act?" Intrigued with this question, one group of scholars proceeded to observe administrators at work and to isolate the dimensions of administrative functioning. This approach has been designated the process approach; it received much of its impetus from students of public administration.

At other times, students of administration posed a quite different question: "What is the scope of the job to be done by the administrator?" Concern over this question led to the formulation of long lists of tasks or work areas which presumably set the bounds of the administrator's responsibility.

* FROM *Preparation Programs for School Administrators*, by Donald J. Leu and Herbert C. Rudman, editors. Seventh UCEA Career Development Seminar, 1963, pp. 123-136. Copyright © Michigan State University. Reprinted by permission of Michigan State University, East Lansing, Mich., and editors.

were undertaken in those two states by a united profession. The president of the Utah Education Association during the most difficult months of this period was a high-school principal. The president of the Oklahoma Education Association, during the difficult time when sanctions were applied to that state, was a high-school principal. These measures brought about a popular referendum and legislative action. They were supported by a unified profession.

The unified professional approach in the United States is unlike any other in the world. No other professional organization in the world has nearly a million members. No other organization has over 8,000 local affiliates. No other has so many large and effective departments. No other organization has an equal record of achievements covering more than a century of activity. No other has a similar chance to grow in strength and usefulness in the United States in the future.

Throughout Europe, and most of South America, if you say you belong to a teachers organization, they ask, "Which organization do you mean, the elementary teachers or the secondary teachers?" Only in Scotland and in parts of Germany will you find one organization representing both elementary and secondary teachers. Everywhere else, there is division. The French even typically use different words for a high school teacher and a primary teacher. In still other countries, the teachers are divided according to political party. This is quite common in Latin America. In still other countries, teachers are divided according to religion.

In this country, perhaps by good luck at first, but more recently, I think, by deliberate design, we have avoided that kind of division. That unity has produced enormously valuable results; it must be preserved.

Finally, as the NASSP begins its second 50 years, I invite each of you to consider these new duties which are taught by new occasions.

1. The duty to stand for the right of teachers to negotiate with boards of education.
2. The duty to seek written professional negotiation agreements and insist that these agreements be faithfully observed by all parties to them.
3. The duty to develop state legislation which embodies these rights and responsibilities.
4. The duty to strive unstintingly to make the concept of the unified profession work in the context of negotiation as in other contexts.
5. The duty to help devise new patterns of administration as required by the negotiation process.
6. The duty to join with your colleagues at all levels to make professional negotiation work for the good of education and the teaching profession.
7. Above all else, the duty to speak out regarding your views on the proper organization of your profession. The silence of influential men at a critical period is an abdication of leadership.

or the various types of educational institution to be administered, further shifts in emphases become apparent. For instance, the social forces with which the high school principal must deal are not as intricate or far-reaching as those with which the superintendent deals. Nor are the tasks to be performed by the principal of the same order as those to be performed by the business manager. It follows that the skills required of one individual in the administrative hierarchy are not exactly the same as those required of another. Accordingly, it seems logical that certain specialized learnings should be provided for specific administrative positions.

These preliminary considerations provide the starting point for the position that I shall adopt in this chapter. Let me summarize:

1. Time-worn as the processes approach, the tasks approach, the setting approach, and the man approach may be, in combination they constitute a useful and comprehensive perspective on the field of educational administration.
2. Each of these approaches has a general applicability to any administrative position in the educational system. Hence every student of educational administration should be exposed, at least in a general way, to each of these approaches to the broad field of educational administration.
3. The "processes" of administration appear to be particularly generalizable to all administrative positions. Perhaps these should be admitted as one phase of learning in which no differentiation should be provided.
4. There are, however, certain differences between the social setting in which the principal of a single school and the superintendent of a total system operate. Some differential learnings—at least some minor emphases—might be admitted here.
5. The tasks to be performed by the high school principal are substantially different from the tasks to be performed by any other administrator in the educational system. Specialized learnings should be provided to prepare the individual for these tasks.

In this chapter I shall proceed, first, to recognize the commonality of the administrative processes to all types and levels of administration; second, to point out some of the ways in which the setting of administration becomes modified in the case of the high school principalship; and third, to indicate the uniqueness of the tasks performed by the leader of the secondary school. Finally, I shall attempt to draw from these observations certain implications for the learning experiences which might be provided for the prospective secondary school principal.

This became known as the tasks approach; it was, for many years, the chief preoccupation of students of educational administration.

More recently the crucial question in the study of administration has become: "What are the forces with which one must deal in the administration of a public institution?" This question has led to a systematic attempt to identify and place in perspective the wide range of social, economic, cultural, and political forces that impinge upon organizations. Thus we have, today, the social setting approach to the study of administration; it is presently receiving a good deal of attention both from social scientists and from students of administration.

But at all times, students of administration have asked: "What skills or qualities are required of the individual for effective administrative performance?" Some have held that administrators are born, not made. Accordingly, they have concentrated on identification and have placed little stock in training. Others, however, have held that administrative skills are developable. They have sought to identify the skills of the effective administrator and the means for developing desirable skills in administration trainees. These are examples of what might be called the man approach to the study of administration.

All of these approaches (and their many modifications and combinations) have contributed to the advancement of administration. Any one alone is somewhat inadequate. But together, they appear to constitute a reasonable perspective on the total field. Irrespective of the nature of the enterprise administered and irrespective of the level at which administrative action takes place, certain characteristic processes are engaged in; specific tasks are performed; distinctive forces are dealt with; and unique skills are required. These are indeed the "inevitables" of administration.

Accordingly, it may be assumed at the outset that a good case can be made for a core of common learnings for all prospective administrators. Such a core should include some attention to the processes or activities which are a part of all administrative functioning, the general organizational tasks which are common to all organizations, and the social forces which inevitably influence all of society's institutions. The purpose of this common core should be to develop in trainees broad perspectives and general administrative skills.

But in considering the educational organization in particular, one is struck with the fact that certain shifts in emphases take place. In educational administration, there are specialized tasks to be performed; there are unique forces to be contended with; and the skills required of the administration are correspondingly specialized. In fact, only the processes of administration remain completely fixed from one institution to another. Hence, it may be assumed further that a good case can be made for another core of common learnings for all prospective educational administrators.

Finally, as one considers the various levels of educational administration,

of analyzing the essence of all administrative action—it follows that any administrative trainee should be exposed to this approach to his field of study. Such exposure should lead to a better awareness of what is involved in administrative functioning. And awareness, in turn, should contribute to effectiveness.

EMPHASIS IN THE SETTING OF HIGH SCHOOL ADMINISTRATION²

Followers of the social setting approach to the study of administration claim that educational administration may be viewed largely as the process of mediating among the complex social forces that inevitably impinge upon the educational enterprise. They argue, accordingly, that much of the knowledge required of the educational administrator is, in reality, the content of the various social sciences. This argument has merit.

It is conceivable, however, that the social forces to be dealt with in one educational institution may be quite different from those in another. Hence, in our considerations of common and specialized learnings for prospective administrators, it may be fruitful, first, to identify these social forces and, then, to look for possible differences in their impact upon various educational institutions. The first question, then, is: *What are the forces?*

Any public enterprise—be it the educational system, the public health service, or what have you—is only one of a very large number of agencies that exist in response to society's needs and look to society for support. In fact, society may be viewed simply as a complex of such institutions. But membership in this complex involves each specific institution in the dynamics of the social system as a whole. Each is influenced by the values and mores of the broader culture; each comes under the regulatory power of the total political system; and each must compete for its share of society's scarce resources. Thus it may be concluded that the forces with which the administrator must deal have anthropological, political, and economic overtones.

As one looks at the internal structure of the organization, the social setting becomes more complex. Every institution is made up of individuals who assume specific roles and occupy positions in the formal and informal organizations. The forces that result from this aspect of the setting are largely sociological and sociopsychological in nature.

These aspects of the internal and external setting of educational administration are illustrated in Figure 1.

Now, how, if at all, does this image help one to distinguish between the

² This section draws in part upon the concept of social systems developed by Getzels and his colleagues at the University of Chicago. See, for example, J. W. Getzels and E. G. Guba, "Social Behavior and Administrative Process," *The School Review*, 65 (1957), 423-41.

THE PROCESSES COMMON TO ALL ADMINISTRATION

The processes of administration have been variously formulated. With minor modifications, however, the formulations advanced decades ago by students of public administration are still accepted.

Most of these formulations include as dimensions of administrative action the processes of decision-making, communicating, influencing, coordinating, and evaluating. These activities appear to constitute the major dimensions of the administrative act. I shall deal briefly with only two of them—decision-making and communicating—in my attempt to demonstrate that the processes of administration remain unchanged from one position to another.

Many modern theorists view decision-making as the most critical process, almost the very essence of administration. The process involves a number of discrete steps. To begin with, a decision-requiring situation, a problem, arises. All alternative courses of action are perceived. The probable consequences of each alternative are estimated. A selection is made. Finally, the decision is communicated and acted upon.

This process is a fairly standard one. It does not change with the substance of the decision any more than it does with the number of alternative courses of action which are available.¹ It is simply the rational process through which means are applied to ends—a process in which an individual can become more and more expert. Hence, it may be concluded that the study of decision-making, per se, as an aspect of administrative functioning, calls for no differentiation.

Like decision-making, communicating is an essential part of the administrative process. This activity also involves a number of steps: A message is conceived. It is coded and sent, verbally or otherwise. It is received and decoded or interpreted. Finally, it is responded to or acted upon.

Again, the process itself is not appreciably influenced by its substance. It is simply an activity involving a message, a sender and a receiver. This is not to say that communication is an easy or unimportant aspect of administration. On the contrary, it is crucial. And like decision-making, it is an activity in which one can become more and more expert. The study of this process, too, calls for no differentiation.

In like manner, each of the processes of administration can be analyzed and found common to all types and all levels of administration. The various processes are but dimensions or aspects of administrative action; they have nothing to do with what kind of organization is being administered.

If such is the case—that the processes approach merely provides a means

¹ This is an overly simplified concept of the process. Add to it the setting in which most administrative decision-making takes place, and the process becomes extremely complex—as the consequences of various courses of action become more and more difficult to anticipate.

relations, organization and structure, staff personnel, student personnel, and program development or instructional leadership.

All of these task areas are of concern to the secondary school principal, as they are to every other administrative official in the educational system. Comparisons among the tasks performed by various administrators reveal, however, that the tasks assume different priorities and call for different degrees and levels of involvement from one position to another. For example, the superintendent's tasks with respect to finance and business management are crucial and require involvement in the procurement, the distribution, and the utilization of resources. The principal's tasks in this area are less crucial, involving mainly the utilization, and not the distribution or procurement of resources. So it is with each of the task areas. For one administrator, the task is crucial and requires specialized involvement; for another it is less crucial and requires limited involvement.

It is suggested that, in the case of the secondary school principalship, the order of priority that should be assigned to the various task areas is exactly the reverse of the order in which they are listed above. That is to say, finance and business management is the least crucial and calls for the lowest level of involvement; program development and instructional leadership is the most crucial and calls for the highest level of specialized involvement. In fact, I would contend that it is primarily the unique aspects of the secondary school principal's tasks in program development and instructional leadership that make his position a specialized one in educational administration.

The distinctiveness of the high school principal's tasks in program development and instructional leadership is, to a considerable extent, a reflection of the uniqueness of the secondary school among educational institutions. There are at least three important manifestations of this uniqueness. In the first place, the secondary phase of education is guided by purposes that are somewhat different from the purposes of other phases of education; consequently, the high school principal's tasks in goal definition call for a degree of specialization. Secondly, the process of secondary education is distinctive in that it incorporates the bodies of knowledge and the modes of inquiry of many disciplines; the high school principal's tasks in process coordination are correspondingly complex. Finally, the procedures that are employed in secondary education have recently proliferated and become specialties of a large number of experts; the high school principal's tasks in the evaluation and selection of procedures are becoming similarly complex and specialized.

Each of these three tasks is somewhat specialized as it applies to the secondary school principalship. Each requires his careful attention. And each has implications for his preparation program.

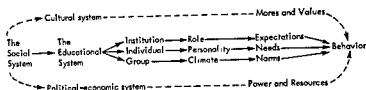


Figure 1. A Concept of the Educational System in Its Setting—Internal and External. (Source: Lawrence W. Downey, "The Secondary School Principal" from *Preparation Programs for School Administrators*, Donald J. Leu and Herbert C. Rudman, eds. Seventh UCEA Career Development Seminar, 1963, p. 128. Copyright © Michigan State University. Reprinted by permission of Michigan State University, East Lansing, Mich., and editors.)

social setting of the secondary school principalship and that of other administrative positions in the educational system?

It seems clear that the "externa" of the administrative setting—the political, economic, and cultural forces—are of greater concern to the superintendent and other system-wide administrators than they are to the administrator of a single institution such as the high school. The superintendent is deeply and directly involved in the economic negotiations that determine education's share of the community's scarce resources; the principal is not so directly involved. Similarly (whether he admits it or not) the superintendent is a part of all political activity at the local level; not so the high school principal. Finally, the superintendent must function within the value patterns of a large community; the high school principal's community typically involves fewer differences than those of a large district.

As one considers the "interna" of the administrative setting, however, the sociological, psychological, and social-psychological forces—one is struck with the fact that, in these matters, there are rather few differences between the principalship and the superintendency. Like the superintendent, the secondary school principal is confronted with the dynamics of formal organization. He deals with the idiosyncratic behavior of individuals; and he contends with the forces exerted by informal groups.

The implications of these observations (assuming they are valid) are clear. Learnings provided in the area of the setting of educational administration might well be differentiated as follows: In the case of prospective district-wide administrators, all aspects of the setting—both interna and externa—should be included in the training program. In the case of prospective administrators of single institutions, such as the high school, the external aspects of the setting might well be de-emphasized and the internal aspects emphasized and considered in direct reference to the appropriate institution.

UNIQUE ASPECTS OF THE TASKS OF HIGH SCHOOL ADMINISTRATION

Most formulations of the task areas of educational administration include: finance and business management, physical facilities, community

swered in light of a comprehensive concept of the secondary phase of education and in light of a personalized philosophical mooring, a value orientation, a sense of purpose and direction.

To attain this sense of direction, which is clearly essential for effective leadership in the area of goal definition, the secondary school principal must equip himself with a broad educational foundation on which to base his theories of secondary education. Such a foundation should include a well-conceived personal philosophy of secondary education as well as an appreciation for all other philosophical orientations. It should include a comprehensive concept of our social institutions and the place of the high school among these institutions. It should include an appreciation for the great cultures of the world—particularly our own—and a notion of the high school's responsibility to transmit culture from generation to generation. Finally, it should include a knowledge of the needs of young adults and an idea of how the secondary school could and should meet these needs.

In brief, the prospective secondary school principal should have an opportunity to think deeply about the secondary school as well as the society and the individuals it serves. His preparation program should provide that opportunity.

The Task of Process Coordination

The high school administrator's task with respect to the coordination of the process of secondary education is a complex one. It can be fully appreciated only in light of a concept of the process itself. For our purposes, the significant question is: In what respects is the process of secondary education distinct from the processes that characterize other phases of education?

First, let us note that formal education at any level is really nothing more than the act of facilitating one of man's most natural and fundamental drives—namely, to find knowledge and meaning in his world. This search for meaning begins at birth; it grows out of the natural inquisitiveness of the human mind; and, unless killed through unfortunate learning experiences, it continues throughout life as the individual becomes more and more "educated."

But this process proceeds through a number of phases. Initially, it is purely random. Later, however, through the influences of formal primary and elementary education, the process becomes more ordered as the skills necessary for further learning are systematically mastered. Still later, during the secondary phase of education, the process becomes even more ordered as the learner acquires facility for the specialized strategies of inquiry and adopts these in his approach to the various fields of study.

This is to say, the distinctive feature of the process of secondary education is that it incorporates the strategies of inquiry of all the basic disciplines. In secondary education, these strategies of inquiry (and the orders of

The Task of Goal Definition

Most of us agree, I believe, that goal definition is an important aspect of administration.³ Admittedly, it has been argued that the leader of the educational institution should simply be "the executor of accepted policies and the patient and deliberate reader of the public will. . . ." ⁴ But even in this innocuous role, the administrator becomes involved at least in the interpretation of the public will and the formalization of education's goals. And if one believes—as I do—that education should be in a continuous state of change and improvement, one must reject the concept of the administrator simply as an executive officer and accept instead the notion of the educational leader as a statesman who is openly and directly involved in the process of reshaping education's goals.

Presuming then, that goal definition is indeed an administrative task, it seems appropriate that we next attempt to estimate the cruciality, the complexity, and the uniqueness of this task as it applies to the high school principal.

Of all our educational institutions, perhaps none is more in need of expert and continuous goal-redefinition than is the secondary school. The disagreement that currently prevails as to the proper function of secondary education is reflected in the various proposals and counter-proposals for reform which are today being advanced by learned scholars, admirals, journalists, and citizens in general. In and of itself, controversy over the purposes of secondary education is not at all bad; but it has important implications for the leadership of the secondary school. For if the high school principal is not equipped to deal with the controversy, he is likely to become confused, insecure, and incapacitated. And his school is likely to flounder in indecision and lack of direction. So the question is posed: How can prospective high school principals be prepared to deal with controversy and to perform their important tasks in goal definition?

In this task the administrator should perform two functions: first, he should act as the mediator or arbitrator among the many conflicting proposals regarding the purposes of secondary education; second, he himself should hold a considered and defensible point of view with respect to the legitimacy or appropriateness of the purposes that guide prevailing practices in his school.

Generalized administrative training typically does not equip the individual for this specialized task. The persistent questions of purpose that constantly confront the secondary school administrator can only be an-

³ Culbertson deals with this function of administration in "Common and Unique Learning: A Rationale," p. 8.

⁴ John Walton, "New Concepts in Educational Administration," *Proceedings of the Canadian Education Association Short Course*, Banff, Alberta, 1962.

fields of study and new ideas as to the sequence and method of presenting subject matter to students; (2) the reorganization of staff to maximize the use of individual teacher talents, (3) the use of television, teaching machines and various other technologies in teaching-learning situations; (4) the adoption of sociological principles in the formation of learning groups; (5) the redesign of buildings and facilities to accommodate newer methods, and many, many others. The agencies involved in these innovations have included the universities, the great foundations, scientists and scholars from many institutions, various governmental agencies, a large number of interested citizens, and, of course, secondary school educators themselves.

As a result of this activity, secondary education is, today, in a state of ferment and change. This ferment, as some hope, may lead the secondary school to major improvement. Or, it may, as others claim, simply indicate that secondary educators are desperate to be doing something in reaction to mounting pressure. In either case the indications are that adequate leadership at the high school level is more crucial now than ever before. Someone—presumably the principal—must guide in the evaluation and selection of educative procedures from the multitude of procedures presently being advanced.

The cruciality and growing difficulty of the task of selecting procedures argues further the case for the generalist in secondary education. The innovations being implemented in high school education are sorely in need of testing and evaluation. But proper testing can be done only in light of a comprehensive concept of the total process of secondary education, and only by an individual who is skilled in perceiving or anticipating the consequences of change for all aspects of the educative process.

The subject area specialist cannot be expected to have the broad view of the conceptual skills needed for this important task. Nor can the generalist administrator be expected to have sufficient mastery of the technical aspects of secondary education. It must be concluded, then, that testing and selecting educative procedures is another specialization of the secondary school principal.

SUMMARY

In this paper, I have noted the commonality of the processes of administration for all types and all levels of administration. I have suggested, however, that the setting in which the secondary school principal functions may involve fewer forces than does the setting in which the superintendent functions. And I have contended that certain tasks to be performed by the high school principal are of such a nature as to make his position something of a specialization among educational administrators.

My suggestions for the preparation program of the high school principal

phenomena they represent) are incorporated into a unified process which becomes the process of secondary education.

Now, precisely what are the implications of this concept of secondary education for the principal's leadership role in the high school? Since the process of secondary education is characterized by several distinct orders of phenomena and corresponding modes of inquiry, the overall process is in constant danger of becoming fragmented as subject area specialists promote their own fields of specialization at the expense of others. It follows that one of the crucial tasks of secondary school administration is the welding of the many aspects of the process into a coordinated unit.

The important point to note here is this: For the adequate coordination of a secondary school program, someone—presumably the principal—must preside over the many aspects of the educative process. Such a task requires the ingenuity of a skillful administrator and also the insight of a highly educated generalist in the field of secondary education.

But exactly what order of knowledge is the domain of the generalist in the field of secondary education? Certainly the high school principal cannot hope to know as much as specialized teachers about specific fields of study. How, then, can he acquire the expertise which is required to preside over the multi-disciplined process of secondary education in his school?

It seems to me that since the process of secondary education is essentially a process of general education, the first requirement of the individual who coordinates this process is an understanding of the real nature of general education. He himself must have an appreciation for all orders of phenomena—the world of numbers, the world of social relationships, the world of art, the world of science, and so forth. Correspondingly, he must be aware of the contributions of mathematics, the social sciences, the fine arts, the physical sciences, etc., to a general education.

The sensitivity or insight that goes with an appreciation for the process of general education should enable the principal to play his leadership role in instruction, without pretense of knowing more than his staff of experts about specific subject areas. His view of the process should be a broad one. He should be able to see imbalances, undue emphases, and inconsistencies wherever and whenever they occur.

Clearly, the demands of the task of process coordination have important implications for the preparation programs of secondary school principals.

The Task of Selecting Procedures

In the last few years, high schools have become involved in a number of so-called school improvement projects. These projects have taken many forms and have involved a rather large number of individuals and agencies. Notable among the changes that have been initiated are the following: (1) the design of new courses of study, incorporating modern advances in the

UNHINGING THE HIGH-SCHOOL PRINCIPALSHIP *

Conrad Briner

A casual comparison of the contemporary educational scene with the scene of years past reveals some features that have long been familiar to schoolmen and other features that bear the stamp of our time.

Subject matter is still the central focus of most school programs, though today there is a great deal more content to be imparted to students than there was in the past. The teacher is still regarded as essential, though today he can draw on many resources, technological and human, to help him in his teaching. School buildings still resemble the schools of yesterday, though today's schools are likely to be larger and decorated in keeping with present-day tastes.

The principalship, especially the high-school principalship, also suggests the past—with modern trimmings.

Today more students, more teachers, and more parents are involved in the planning and the carrying out of the school program. Administrative tasks are delegated to a larger and more diversified administrative staff. More schooling is usually required to prepare for the principalship, and special certificates are issued to attest to professional qualifications.

But except for a few concessions to contemporary needs, the role of the principal today is strikingly similar to the role of the principal in years past. The principal is still the chief disciplinarian; he is still the co-ordinator of activities generally associated with the educational program; he is still the chief record-keeper for the school district and often for the state; he is still the paternal image to teacher and students; and to the community he is still "the school—the program." He is not a theorist, but a practitioner, a decision-maker, a doer.

The modern-day concept of the high-school principalship is hinged to these notions, and it is these notions that must be unhinged if the role of the principal is to be so defined that it will provide the dynamic administrative leadership needed in today's high school.

It is true that the principal's role varies from school to school. For each principal brings to the post a unique personality, and each school has an individuality of its own. But in most schools there is a core of expectations

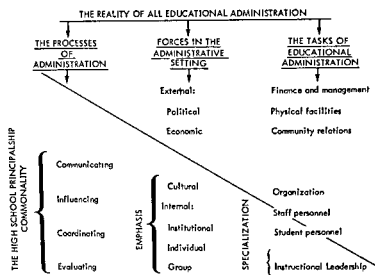


Figure 2. The High School Principals: Areas of Commonality, Areas of Emphasis, and Areas of Specialization. (Source: Lawrence W. Downey, "The Secondary School Principal" from *Preparation Programs for School Administrators*, Donald J. Leu and Herbert C. Rudman, eds. Seventh UCEA Career Development Seminar, 1963, p. 126. Copyright © Michigan State University. Reprinted by permission of Michigan State University, East Lansing, Mich., and editors.)

are implicit in Fig. 2. It will be noted that the processes which are the essence of administration *per se* are included; the internal aspects of the social setting are given some emphasis; and instructional leadership is isolated as the chief area of specialization.

To summarize in another way, one might claim that the high school principal is first and above all else a generalist administrator. But as an administrator directly responsible for one particular educational institution, he is required to have specialized technical skills. These are the skills of the generalist in secondary education.

Major Dimensions of High School Administration

Conrad Briner states that high school administration has three major dimensions: technical, managerial, and conceptual. The technical dimension is represented by special skills related to activities of testing, evaluating, accounting, and maintenance. The managerial dimension involves coordination of technical skills and management of the physical features of the enterprise. The conceptual dimension provides stimulus and direction to the other two dimensions.

It will be possible to meet the challenge of education for the changing society only if the job of the high school principal is unhinged from its traditional concept.

exert influence is an important aspect of their professional leadership. To the extent that their belief is valid, it is possible to cast off the traditional role of the principal that hampers attempts to redefine administrative leadership in today's public high schools.

Certainly the need for a new definition can be defended. In our homes, in our communities, and on the job our lives are changing at an astounding pace. The lag between what we know about how students learn and what we do in most high-school programs is glaringly apparent. Yet in the conduct of the high-school enterprise, practices are amazingly resistant to experimentation and innovation. The behavior of high-school administrators can be the greatest obstacle to long overdue change.

Our insistence on clinging to a timeworn concept of the principalship is testimony to the magnitude of our reluctance to change. Yet change of some sort is imperative if the leadership in the public high school is to become effective. We glibly refer to the principal as the instructional leader of the school. Like many of our pet expressions in education, this is a ghost term. Instructional leadership that finds expression in anything more than an occasional supervising chore is almost non-existent. How many principals act as if they were instruments of change—generating ideas, setting ideas in motion, helping ideas become forces of decisive change and improvement in the educational program?

If the principalship is to be vitalized, the definition of the principal's role cannot be bound by past practice and current vogue. Boldness and daring are needed, but not without guides or delimiting framework. The limits of practice and power for the principalship should not be determined solely by individual need dispositions and opinions of various groups. An all-encompassing framework for analysis is essential. Without this framework, no analysis of the principalship, no defensible definition for administrative leadership, is possible. Without this framework, the principal's role will continue to be shaped by the desires of an individual or the attitudes of groups, possibly expressed on the spur of the moment.

The framework for analysis suggested here includes a broad theoretical view of the total educational enterprise; an acknowledgment of the institutional and the personal factors in the administrative situation, or a picture of things as they are; and a picture of things as they could and should be. A strain of idealism is essential if the excitement and the interest necessary to school improvement are to be generated and maintained.

In thinking of the principalship in terms of the total educational enterprise, the many-faceted and interdependent nature of the educative process must be considered. No one aspect—whether it be people, the curriculum, or the physical environment—can be considered without regard for the others. A variety of nomenclatures may be used in describing the educative process. But however we choose to picture the educational enterprise, it must be understood as dynamic.

Any concept of the principalship must take into account those demands

for the role of the principal. Certain responsibilities, certain duties, are seen as his.

For some principals this core of expectations offers a refuge from the almost untenable complexity of the job. These principals busy themselves with the chores of disciplinarian, co-ordinator, record-keeper; and duties in these realms are seen as the most essential part of the job. For other principals this core of expectations is a frustrating barrier to a new definition of their job, to creative planning, to desirable changes in the high-school program.

How can we go about dissecting the principal's role? What approach can we use in arriving at a new definition of his role?

Social psychologists have given us one approach for analyzing administrative behavior: the study of behavior in the context of a social system. The behavior of the high-school principal, these psychologists suggest, is a response to his needs as an individual. More than that, his behavior is a response to the expectations of various groups associated in some way with the educational enterprise. When the principal is fulfilling his desires and the groups' desires for the role of principal, he is at peace with himself and the groups to which he relates. This is an appropriate way of thinking about the high-school principal, but any explanation of the behavior of an individual in terms of a social system construct is an oversimplification.

The role of the principal is highly complex. In the administration of a high school, social, political, economic, cultural, and demographic forces are facts of life, facts that cause the phone to ring and announce new demands on the principal.

Some principals say that they behave pretty much as they please. Their own personality is dominant; the expectations of others take second place. Other principals say that they have many administrative roles, each one dictated by the expectations others hold for the principalship. These principals often alter their roles, putting aside inclinations to follow their own wishes. Rather than invite conflict, they adapt their role to accommodate the varied demands. Principals in either group can be effective.

Principals who try to accommodate the vast assortment of demands that come their way have to vacillate between role definitions. These administrators may have difficulty telling you on the spur of the moment what their role is and where the program is headed. These principals have little influence on the expectations of referent groups. They feel that they cannot and should not combat the influence that referent groups have on the principalship. If their own needs and group expectations are incompatible, they merely acquiesce to the group. In perceiving the group influence as basic to any definition of their role, they perpetuate the traditional concept.

But there is another way of looking at the principalship. The principal can do a great deal to shape the expectations of referent groups. Good communication, appropriate social behavior, and effective decision-making are his shaping tools. In fact, some principals believe that to use these tools to

fection. In the conceptual dimension the administrator's concerns are directed to the entire school program, to the community setting, to learning and the individual. In this phase of his role the administrator seeks out, and capitalizes on, the teachers' interests and goals. He meets, encourages, and helps teachers as they strive for quality in educational practice. The excitement and the adventure of unusual ideas inject novelty into the program and invigorate growth.

In encouraging teachers to explore the use of teaching machines, for example, or a certain approach to student evaluation or team teaching, the principal must be prepared to stimulate with suggestions; he must be a good listener; he must know where to locate and how to use needed resources. In and out of the classroom, teachers must see the principal as a partner in the teaching process and as a member of interest groups in the formal and informal organization of the school. He must be respected because of his high regard for competence and his repeated agitation for change.

In the conduct of any educational activity, the conceptual, the managerial, and the technical dimensions must be perceived as closely interrelated. Recognizing the interdependence of the parts may be as important as recognizing each component part.

Managerial and technical functions provide the setting for exploring new ideas. An experiment with team teaching may call for changes in the schedules of staff, students, and facilities. To accommodate changes in staff utilization and student groupings, new plans may have to be made for space, materials, and audio-visual aids; and schedules may have to be rearranged. Technical assistance may be needed to create and administer devices for appraising change in student behavior.

In the conceptual dimension, dissatisfaction with the status quo and agitation for change are allied with the quest for perfection; the managerial and the technical tasks are derived from this dimension. This is not to suggest an inferior place for the managerial and the technical aspects of the principalsip. On the contrary, these two dimensions are crucial, for ideas for experimentation and innovation can be translated into action only with the help of good management and technical skills. The conceptual dimension must be dynamic, since its prime function is to induce change, but the managerial and the technical dimensions must also be dynamic to accommodate change.

All dimensions must be sensitive, energetic, and forceful. All three dimensions are essential ingredients of the high-school principalsip. However, the cues for management and technology must grow out of leads provided by the conceptual dimension. It is generally agreed that high-school principals have too little preparation and too little concern for the conceptual responsibilities of the principalsip.

How can the principalsip encompass these three dimensions? What kind of personnel and what kind of administrative structure are needed

of the school and the community that are always part of the administrative environment. The principal must cope with social, political, economic, and demographic realities. He is responsible for reports and records; for activities associated with public and personal relations; for communications directed to groups and individuals in and out of the school organization.

This phase of his role is part of the time-honored concept of the principalship. In remaking the role of the principal, situational factors must be acknowledged as existing, but little more. They must be reckoned with only after the conceptual model is complete and attention is directed to organization of the school for administration.

Situational factors are not necessarily unalterable: they represent what is, and they are seldom ideal. Any view of administrative leadership must look toward an ideal, an ultimate goal that is not shackled to the exigencies of local characteristics of the school or the community, or to the personality of one administrator. The ideal we strive toward should continually be re-evaluated.

With a framework for analysis as a guide to definition, it is possible to part the hinge that connects the role of the high-school principal with past practice and then to turn to the quest for an extraordinary concept of this role. It must be admitted that the break is undertaken with no little temerity, for the weight of custom and tradition cannot be underestimated. As the familiar is challenged by the new, a tenable arrangement for administration of the high school must be provided. Failure to do so can cause conflict and setbacks in conceiving and carrying out change in the principal's role. The risk of failure may be kept at a minimum if the definition of the principal's role can be made compatible with the conceptual framework described here.

High-school administration has three major dimensions: technical, managerial, and conceptual. The technical dimension is typically represented by specialized skills related to such activities as testing, measuring, interviewing, disciplining, coaching, scheduling, recording, accounting, spending, operating, and maintenance. The duties of assistant principals, deans, counselors, teachers, teacher aides, secretaries, clerks, and custodians all call for technical skills.

The managerial dimension involves the co-ordination of technical skills and the management of the physical features of the enterprise. In this dimension there is concern for the effectiveness of people, for the adequacy of plans, for conformity to rules, for economical use of space, time, and funds. Decisions must be made on scheduling of content, staff, and students; on accounting for students; on budgets, purchasing, and accounting; on plans for school-building, maintenance, and operation. Most studies on the activities of the principal indicate that the major portion of his time and energy is spent on managerial duties.

The conceptual dimension provides stimulus and direction for the other two dimensions as the total educational enterprise strives to achieve per-

by several individuals who perform various functions by virtue of special training, experience, and interest as well as assignment. The actual number of staff members needed for the principalship may vary with the size of the high school.

Co-operation among the members of the team is essential. The positions must be staffed by individuals who can work together. One dimension cannot operate without regard for the others. If the principalship is staffed with three people, the three must complement one another. Any one member who pursues his own interests without regard for the effect his actions may have on the others can be destructive.

But the prime administrative leadership and authority must reside with the person identified with the conceptual dimension. It is he who spends most of his time with the teachers. It is he who prompts experimentation and innovation in instruction through the interchange of ideas with teachers. The management and technical activities of the other administrators must serve this end.

The interdependent nature of the three dimensions must not be misunderstood in the light of the emphasis on the conceptual dimension. The managerial and the technical responsibilities also require leadership and authority, but their major purpose is to facilitate program change through the interaction of teacher and administrator. As I have already noted, when a power vacuum exists ideas may wither on the vine because of the absence of opportunities for trying them out. This obstacle to effective high-school administration can be avoided only if there are levels of leadership and authority commensurate with the nature of the responsibility involved.

Thus the principalship must be viewed as a position that involves shared functions, not simply as an estate held by one person. Everyone interested in, and associated with, the conduct of high-school education must recognize the functional worth of each dimension. If it takes three people to staff the principalship, they are to be regarded as a team, each member of which has a unique role in administering the high-school program. In relation to other levels of the administrative structure—to teachers, students, and the community—they exhibit three unique positions of responsibility and authority; in relation to one another, the holders of the managerial and the technical roles defer to the holder of the conceptual role.

A realistic concept of the principalship is crucial to improvement of the high-school program. As effective leadership, it must represent an inherent predisposition to accept change. It must provide creative conceptualization and management of change. Without this predisposition for change and a continuous search for ideas and exemplary practice, schools will remain committed to the ordinary and distrustful of the extraordinary. It will be possible to meet this challenge only if the job of the high-school principalship is unhinged from its traditional concept.

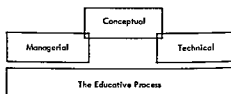
to accommodate functions associated with these dimensions? Can a principal be both theoretician and practitioner, both creator and manager? Should the principalship consist of a single position in which are vested the responsibilities and the authority necessary to all three dimensions? Or should responsibility and authority be shared among several members? Should the school administrative structure change to permit increased opportunity for delegation of responsibility and authority beyond the typical organization of line positions existing in most high schools?

Answers to these questions are not readily available, but certainly we know what the staffing patterns should not be. One person cannot fill this position adequately. Ordinarily the principal lacks the time, the know-how, and the energy to satisfy the demands of all three dimensions. The traditional pattern typically represents a compromise, usually at the expense of the conceptual dimension and in favor of the managerial. As a manager, the principal may be concerned chiefly with the planning and the construction of new facilities, with keeping costs at a minimum, with discipline, and with communication between school and community. In the traditional pattern, the principalship typically does not display the dynamic administrative leadership focused on the conceptual dimension.

Unquestionably, some one individual in the school must bear the major responsibility for leadership and authority. Probably this individual should also be the key person in the agitation for improvement in educational performance. He should be a font of challenging ideas. But more than challenging ideas are needed. Without appropriate management decisions and technical skills, creative ideas may be made ineffectual by a decision, or power, vacuum. Implementation of ideas must be planned to involve people, time, space, and materials, and plans must be put into action by appropriate decision-making. Management and technical resources must be mobilized if practice is to have a chance to succeed; inventiveness and ingenuity must have opportunities to be expressed if ideas are to be put to work in the educative process.

To accommodate these dimensions may require an administrative organization that provides for three interdependent administrative functions. The following diagram depicts one possibility in organization:

Diagram on Organization (Source: Conrad Briner, "Unhinging the High-School Principalship," *The School Review*, Vol. 68, No. 3, Autumn, 1960, p. 326. Reprinted by permission of the University of Chicago Press.)



The diagram suggests a shared or overlapping leadership that has the knowledge and skills essential for effective decision-making. The responsibilities of the principalship are carried out not by a single individual but

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BARRIERS TO CHANGE IN PUBLIC SCHOOLS*

Richard O. Carlson

A good many people, reflecting on our times, suggest that we are in the advanced stages of a revolution in education. Some of them are even prepared to argue the point, and there is considerable evidence to support their case. There are, for example, at least ten national projects in science, eleven in mathematics, one in English, two in foreign languages and four in social sciences that are currently preparing curriculum materials and testing them in the schools. The federal government has given considerable financial support to this so-called revolution in education. Over 12 million dollars has been disbursed by the Cooperative Research Branch of the U.S. Office of Education since 1956 for research on the improvement of education. This, of course, represents a very small amount in comparison to the support for the improvement of education which has been provided by the National Science Foundation and Title III of the National Defense Education Act.

In spite of all of the current activity, it seems fair to say that there is quite widespread pessimism about the ability of public schools to make rapid and adequate adaptation to our fast changing times.

I am sure you have heard many times Paul Mort's fully publicized finding that it takes 50 years for the complete diffusion of an educational innovation which is destined to be fully accepted. I am sure, too, that you are well aware of the generalization that public educational institutions are painfully slow to change. You have, no doubt, marveled, as I have, at the tremendous change facility of other sections of our work world such as agriculture and medicine. Evidence of the ability of these enterprises to change is all around us and constantly forces its way to our attention.

Why is this the case? Why are educational systems reputed to be slow to change and medicine and agriculture quick to change? Could it be that there exists a greater need to change practices in medicine and farming than there is need to change educational practices? Is the practice of education so advanced and the practice of medicine and farming so primitive as to explain the diverse rates of adaptability? I think not.

* FROM *Change Process in the Public Schools*, by Richard O. Carlson et al., pp. 3-8. Copyright 1965 by The Center for the Advanced Study of Educational Administration, University of Oregon. Reprinted by permission of The Center for the Advanced Study of Educational Administration.

Effecting Change: An Administrative Process

Ingredients of Change

The central theme of this book of readings is change. This chapter is concerned with aspects of change critical to the administrator who desires to improve his school program. Certainly, if change is to occur, the administrator must know the processes by which change occurs. In addition to the process the administrator must understand the barriers to change and the elements or ingredients that must be considered in the process.

Obstructions to Change

The need for change in education has been firmly established. The question arises, "Have we changed and if not, why not?" Richard O. Carlson states that there are three basic barriers to change: (1) the absence of a change agent, (2) lack of understanding of the knowledge needed to induce change, and (3) the absence of organizational stimuli that automatically encourage change.

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THREE BARRIERS TO CHANGE

I. The Absence of a Change Agent

Part of the explanation of the slow rate of change in public schools, according to many students of organizational change, lies with the absence of an institutionalized change agent position in public education. A *change agent*, for the purposes of my remarks, can be defined as a person who attempts to influence the adoption decisions in a direction he feels is desirable. He is a professional who has as his major function the advocacy and introduction of innovations into practice.

The county extension agent is well recognized as a change agent as far as farming practices are concerned. But who is it that performs a similar role for educational practice? What office in public education as we know it has responsibility for the advocacy of change? Does such a function rest in the apparatus of state departments of education? Does it rest in the office of the county school superintendent? The answer to these questions seems clearly to be no. By and large, county and state levels of public education take as their major function one of regulation.

If the change agent role is not imbedded in county or state levels of public education, then perhaps it lies in the local school district unit. It would seem difficult to make a case that local school districts have developed positions wherein the superintendent takes as his major function the advocacy of change.

It seems easy to conclude that the change agent counterpart of the county extension agent has no office in our public school enterprise. And, as has been indicated, many attribute the slowness of change in educational practices to the absence of a change agent.

Let us assume, as seems reasonable to me, that by default of others, the change advocate role must be taken by the local school system through the office of the superintendent. This would seem to be not only a fair assumption, but, in the marked instances of rapidly adapting school districts, to be a fair description of reality.

Right away this makes obvious a difficulty: whereas the change agent prototype of the county extension agent operates outside of and free from the farm unit he is attempting to change, the school superintendent as a change agent is a central part of the unit he must take as his change objective. Being in and of the organization, the function of change advocacy for the school superintendent is difficult because he frequently must prescribe the change of his own practices.

In the area of providing public schools with a change advocate, the state of New York must be seen as a leader. During the last few years, through the Commission of Education in New York, a series of studies have been conducted aimed at the development of a plan for "improving the process

of educational change in the elementary and secondary schools of the state." The plan for managing change that these studies have developed is worth your attention and can be found in a monograph titled "Organizing New York State for Educational Change," which is published by the New York State Department of Education. In essence, the plan suggests that in order to deal effectively with the problem of change in school practices, three distinct and separate units must be established under the control of the Commissioner of Education of New York. One unit is a design unit where ideas are generated. The second unit has the task of evaluating the ideas flowing from the design unit. The third separate unit has as its function the development and dissemination of the practices which emanate from the other two agencies. The extent to which this plan is successful in improving the process of educational change in the schools of New York is, of course, still to be seen. Nevertheless, it is very encouraging to see the human talent and effort that is involved in the undertaking. And it is clear that the problem of establishing a viable change advocacy function among the many levels in our system of education is one of extreme importance and one for which we should recruit our best minds.

2. A Weak Knowledge Base

In addition to the lack of a change agent, schools are also handicapped in change activities by the weakness of the knowledge base about new educational practices. This is apparent when one contrasts the knowledge base about innovations which is available to the school superintendent with that which is available to the county extension agent. As you know, the county extension agent is backed by very extensive and practiced research, experiment, and development operations. He is in a much more favored position than is the school superintendent to judge the merits of the innovations he attempts to have adopted, and to demonstrate these merits to the acceptors. It is rare indeed when an educational innovation is backed by solid research. It is even rarer to find an educational innovation which has been fully developed and subjected to careful trial and experimentation. Thus, the school superintendent as a change agent must ordinarily do not only the work of the county extension agent but also the work of the agricultural experimental station. This is a job of large dimensions. But, as you know from first hand experience, it is a job which is very exciting and satisfying.

The future may be brighter on this point: the school administrator may be relieved of some of the burdens of being both a county extension agent and an agricultural experimental station. The federal government has within the last year established four large educational research and development centers (at the Universities of Oregon, Pittsburgh, and Wisconsin, and at Harvard) and more centers will be established in the future.

These centers are charged with research, development and dissemination

tion responsibilities and in this sense can be seen as emulating the U.S. agricultural experimental stations. These centers have high potential and, given time to get into full operation, should have a large influence on public education. They should give school administrators a knowledge base about educational practices that is as firm as that from which the county extension agent operates.

3. "Domestication" of Public Schools

To the list of factors which hinder change activities in public schools, a list which so far in my remarks includes the lack of a change agent and a weak knowledge base about innovations, let me add a third factor. This third factor has to do with organizational characteristics of schools and specifically with the relationship between the school as an organization and its clients.

When we talk about service organizations, those organizations which provide a self-improvement or rehabilitation function to clients which the organizations must motivate, it is clear that some of these organizations have the power or exercise the right to select its clients. Other service organizations, of which the school is one, cannot select their clients.

It is also obvious that clients are free to accept or reject the services provided by some service organizations but with some service organizations, the clients are *not* free to accept or reject the service—the clients of these organizations must accept the service. The school is one organization in the latter category.

Thus, some service organizations operate in an environment where they can select their clients and the clients are free to take or leave the service according to their desire. One of many examples of this type of organization is the *private college*. And some service organizations operate in an environment where they *cannot* select the clients they are to serve and the clients *must* accept the service. One of several examples of this type of organization is the *public school*.

The significance of the relationship with clients is implied in the label of "domesticated organization" which is given to organizations like the school which cannot select clients and where the client must accept the service. The label of domesticated organization is used to indicate that this class of organization is protected and cared for in a fashion similar to that of a domesticated animal. They are not compelled to attend to all of the ordinary and usual needs of an organization. For example, they do not compete with other organizations for clients; in fact, a steady flow of clients is assured. There is no struggle for survival for this type of organization—existence is guaranteed. Though this type of organization does compete in a restricted area for funds, funds are not closely tied to quality of performance. These organizations are domesticated in the sense that they are protected by the society they serve. The society sees the protection of these

domesticated organizations as necessary to the maintenance of the social system and creates laws over and above those applying to organized action in general to care for these organizations.

The consequence of domesticating organizations, as far as organizational change is concerned, is to restrict the need for, and interest in, change because the environment of the domesticated organization in many important respects is more stable than it is in other types of organizations. When important elements of the environment are stable, as you know, the necessity for change is reduced.

Therefore, it seems reasonable to suggest that the domestication of public schools is a hindrance to change along with the lack of a change agent and a weak knowledge base about educational innovation.

THE IMPACT OF RESEARCH FINDINGS ON INNOVATION ADOPTION

Now let us return to the problems of the school superintendent as a change agent and ask the question of what guide lines are suggested for his action by educational research. What does research about the adoption of educational innovations tell the school administrator?

Research on the spread of educational innovations has several characteristics which set it apart from many other streams of diffusion research. One distinctive feature is that a vast amount of work has been done. It seems fair to say that the diffusion literature is as sophisticated and as well developed as any other area of scientific study to which educators have given their attention. Further, the study of the spread of educational practices bears the mark of one man. The late Paul Mort and his students seemed almost to have cornered the market on studies of the diffusion of educational innovations. This last feature has, however, apparently permitted a third and very important characteristic of such studies: an implicit assumption that characteristics of chief school officials are unimportant in explaining rates of adoption of innovations.

Mort and his students have displayed considerable ingenuity in the isolation of variables—usually relating to the economic base of the school district, ranging from expenditure per pupil to teachers' salaries—and in fitting the variables into accounting schemes.

A conclusion based on over 100 studies done in what I choose to call the Mort tradition is this—"If but one question can be asked, on the basis of which a prediction of rate of adoption of educational innovations is to be made, the question is: 'How much is spent per child?'" Said another way, school systems that are first to adopt educational innovation spend the most money per child and those last to adopt educational innovations spend the least amount per child.

Assuming some causes and effect relationship to be at work here, what does this finding, which comes out of a vast amount of research effort,

suggest to the school superintendent? I believe that it suggests a clear line of action. If a school administrator wants his district to be on the so called leading edge in the development of public schools, his efforts above all else should be directed toward securing for his district as much money as possible and as few students as possible. I am sure this is well understood for we can all cite examples showing that this is exactly what some school districts attempt to do.

I think it is indeed fortunate, however, that this finding of the relationship between money spent per child and rates of adoption of educational innovations is being challenged by data which are now emerging.

In a recent study of the adoption of such educational practices as team teaching, modern math, foreign language instruction in the elementary grades, programmed instruction, ungraded primary classes, and accelerated programs in high schools among school systems in a county in western Pennsylvania, it was found that amount of money spent per child had a negative, insignificant correlation. That is, amount of money spent per child had no predictive power in relation to the rate of adoption of these innovations.

This is not a single finding in one county. The general finding was replicated in two ways. First, another research project was undertaken in the state of West Virginia and again it was found that the rate of adoption of these innovations was not significantly related to expenditure per child. And second, even though the expenditure level per child is considerably lower in West Virginia than it is in western Pennsylvania, there was found to be no material differences in the rates of adoptions of these innovations between these two regions of the country.

To my way of thinking, these rather recent findings which indicate no significant relationship between rate of adoption of educational innovations and expenditure per child, are indeed happy ones. They should be popular with school administrators because, for one thing, they break away from a mechanistic explanation and show the school administrator as something other than a victim of his local budget.

These findings coupled with others, which I will not bother to recite, for they are well covered in Everett Rogers' paper, give very clear evidence of the important role of school superintendents in the process of adopting educational innovations, and in general of the centrality of human rather than monetary aspects in the adoption process.

The Change Process

Henry M. Brickell says that the school is a social institution in which someone teaches something to someone else with a method at a time in a place. The six major elements of the institution are teachers, subjects, students.

methods, times, and places. Innovation requires some major shifts in the normal arrangements of these institutional elements. In the next selection Brickell analyzes the basic elements of the organizational structure and the process by which change takes place in the school.

ORGANIZING FOR EDUCATIONAL CHANGE *

Henry M. Brickell

THE PROCESS OF CHANGE WITHIN LOCAL SCHOOLS

A school is a social institution in which someone teaches something to someone else with a method at a time in a place. The six *major structural elements of the institution* are: teachers, subjects, students, methods, times, places. This study focused exclusively on programs which require *significant shifts in the normal arrangement of those institutional elements*.

It might be helpful to begin with a general formulation which the Consultant offers as a possible explanation for the roles played by the public, the board of education, the administrators, and the teachers in the dynamics of instructional innovation.

A school, like any other institution, tends to continue doing what it was established to do, holding itself relatively stable and resisting attempts at restructuring. There is a sound reason for this: Stability in the institutional structure makes for maximum output of the results that structure was designed to produce. Any change in the arrangement of its elements tends to cut down production, at least until new habit patterns are formed.

There are two distinct groups of people who might be expected to influence structural change in the local public schools: the public, which is external to the institution, and the profession, which is internal to it. The process of local educational change is determined by the relationships of these two groups: the public and the board of education as external, the administrators and the teachers as internal.

Calls for distinctly different educational results tend to come from outside the school itself, that is, from the public and the board which represents that public.

When the school is asked to produce a different kind or a different quality of education, some rearrangement of its institutional elements may be in order. One of the tasks of a chief administrator—such as a superintendent of schools—is to take external demands for different results and translate

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them when necessary into new patterns for organizing the elements of the institution (or for changing the elements).

Like the teachers, the administrator has a stake in maintaining stability so that traditional results can be produced. He also must be particularly responsive to demands for new kinds of results. Schools are usually structured so that the chief administrator can be kept responsive to external demands: The superintendent serves in a contract relationship to a lay board of education.

Even before new demands are expressed locally, an administrator who sees nearby schools like his own making structural changes may anticipate the local pressures which are to come and move in advance to meet them.

THE ROLE OF THE PUBLIC, THE BOARD, THE ADMINISTRATOR AND THE TEACHER

Parents and citizens groups in most communities do not exert a direct influence on the adoption of new types of instructional programs, but their influence is decisive when exerted. *Implication: In disseminating new programs, it is not necessary to arouse the active enthusiasm of local parents, but it is necessary to avoid their active opposition.*

Most parents do not know enough about educational methodology to favor or to oppose specific innovations. Parents and the public seem to exert their influence by creating a general climate of interest—or the lack of it—in school affairs rather than by singling out and endorsing particular approaches used in other school systems. However, if for some reason the public develops a lively interest in a new type of program—foreign languages in the elementary school, for example—that program is likely to appear in the local classrooms. In the same way, if parents decide to oppose a new program for any reason, it is difficult if not impossible to make it succeed.

In a few alert communities, parents and citizens avidly follow developments in neighboring schools and occasionally urge the local schools to adopt new programs which they believe would be desirable. That degree of active community interest in specific instructional innovations is, however, rare.

What about public reluctance to support better programs—is it a factor inhibiting professional staffs eager for change? Not according to the information gathered in this study, which clearly indicated that community expectations and professional ambitions are usually in reasonable harmony with each other. Communities which expect little of schools and are unwilling or unable to pay for quality programs tend to attract and to retain teachers and administrators who are willing to work in that environment.

Taking the State as a whole, what this means is that severe dislocations between the hopes of the profession and the expectations of the community are rare. The essential similarity in viewpoint between the staff and the public is probably the reason parents and citizens do not constitute a *distinctive, separate* influence on instructional innovation. Their wishes evidently have already been absorbed into the schools. In fact, as suggested earlier, one function of the administrator is to see to that very absorption.

The board of education in most communities is not a strong agent in determining the path of educational innovation, but its influence is decisive when exerted. *Implication: New programs must be disseminated in a manner which will not arouse the opposition of boards of education.*

The role played by the board of education is much like that of the general public. While the board and ultimately the public are important sources of *demands for improved outcomes*, the board like the public rarely *demands specific instructional innovations*. That is, while it may ask that the mathematics program be updated for the space age, it is unlikely to select new content or methods for the mathematics curriculum.

Most board members, like most citizens who have not specialized in education, do not know enough about instructional methods to suggest that any given new technique be either adopted or rejected. Many board members are only vaguely aware of new instructional developments because they devote their time to other matters. Consequently, a local decision to adopt a new teaching approach ordinarily is not subject to strong influence by the board.

Naturally, if the board for some reason decides either to urge or to oppose the adoption of a particular innovation, it will ultimately work its will upon the schools. For this reason staff members who are eager to introduce an innovation usually take care to see that the board is at least willing to see the change made.

In certain types of communities board members learn about innovations in other school districts through reading newspapers, attending meetings, and talking with their own professional staff. A board which takes an interest in innovation creates a situation in which the staff must at least explain why new approaches have *not* been adopted. From time to time a board goes even further, usually in communities of very high socio-economic level, and virtually mandates the use of a specific new approach. But it is rare to find a board directing the instructional program to that degree.

Just as with community aspirations and professional ambitions, the viewpoint of the board of education and the viewpoint of the superintendent are ordinarily in harmony. Probably because of that harmony, the board is not

visible as a *separate* influence on instructional innovation. The superintendent evidently represents the wishes of the board adequately.

New types of instructional programs are introduced by administrators. Contrary to general opinion, teachers are not change agents for instructional innovations of major scope. Implication: To disseminate new types of instructional programs, it will be necessary to convince administrators of their value.

The statement above is made not about classroom practice, but about new types of instructional programs which usually touch several teachers and which may require breaking up old work patterns.

Instructional changes which call for significant new ways of using professional talent, drawing upon instructional resources, allocating physical facilities, scheduling instructional time or altering physical space—*rearrangements of the structural elements of the institution*—depend almost exclusively upon administrative initiative. Even in the best of circumstances for the expression of new ideas—in schools where administrative authority is exercised with a light hand and faculty prerogative is strong—teachers seldom suggest distinctly new types of working patterns for themselves.

To understand this, it must be remembered that the teacher is not an independent professional, not a private entrepreneur free to alter his working situation when he chooses—not free to decide what he will teach to whom at what time and at what price. He is instead a member of the staff of a stable institution.

His behavior reflects his position. So long as he remains inside his classroom he exerts almost total control. The moment he steps outside it, however, as proposing a new type of instructional program would require him to do, he comes face to face with a group of his peers. Any semblance of control evaporates; he has no more authority than other members of the group, some of whom will not welcome his proposals.

The complexity of group decision-making and the difficulty of a peer group's choosing among several attractive possibilities (or, more exactly, possibilities with different degrees of attractiveness for each member) are well known. The value of leadership and the uses of authority in such a situation are also well known. An administrator is powerful because he can marshal the necessary authority—if not the necessary leadership—to precipitate a decision.

The language which has been developed to describe school administration, a language used almost universally by practicing administrators as well as by college professors in the field of administration, is not descriptive of the actual process. Phrases like "democratic administration," "the team approach," "shared decision-making," and "staff involvement" are commonplace. Behavior to match them is rare. The phrases themselves are

often used with the intention of hiding the great strength of administrative action.

The participation patterns in widespread use are very often little more than enabling arrangements, organized after an administrator has decided the general direction (and in some cases the actual details) of an instructional change. Committee studies, visiting other schools, bringing in consultants, sampling available instructional materials and similar activities are frequently employed simply to persuade the faculty to embark in a direction which has been at least partly pre-selected.

His subtle leadership—or undercover direction—is thought by the practicing administrator to be most successful when he can say at the end: "They think they thought of it themselves."

In summary, authority is a critical element in the shaping of institutional decisions. Schools depend heavily upon administrative authority in decision-making. Consequently, the control center of the institution, as schools are managed today, is the administrator. He may not be—and frequently is not—the *original source of interest in a new type of program*, but unless he gives it his attention and actively promotes its use, it will not come into being.

Classroom teachers can make only three types of instructional change in the absence of administrative initiative: (1) change in classroom practice, (2) relocation of existing curriculum content, and (3) introduction of single special courses at the high school level. Implications: (1) Classroom teachers cannot be expected to introduce new types of instructional programs without administrative attention and (2) In-service courses designed for individual teachers rather than for entire departments or faculties (that is, courses designed to improve the teacher rather than to change the program) should be limited to matters which can be accomplished in one of the three ways indicated above.

There appear to be three types of change which are within the effective control of classroom teachers. Simple willingness on the part of administrators seems to be sufficient to enable the following to take place:

- (1) *Change in classroom practice*—that is, any alteration in instructional procedure which a teacher can accomplish in his own classroom without disturbing or dislocating the work of other teachers. The teacher exerts almost complete control over his own classroom work. In fact, the administrator very often does not know what the teacher is doing from day to day.
- (2) *Relocation of existing curriculum content*—an activity which a group of teachers commonly initiate and can carry forward

relatively unassisted so long as there is no administrative opposition. A typical example would be the relocating of arithmetic topics between the 4th and 5th grades to assure proper dovetailing. Teachers quickly sense that a sequence is out of joint and are usually eager to set it straight.

- (3) *Introduction of single special courses at the high school level*—these are commonly terminal courses in a sequence. They are often begun at the initiative of a teacher who has just returned from an intensive learning experience, as during a sabbatical year or in a summer institute. The teacher may urge the administrator to schedule a course for bright students so that they can share what the teacher himself has just learned. Administrative permission is usually enough; the teacher's own drive and enthusiasm will bring the course to life. Incidentally, this particular adaptation is like a classroom practice in that it has but little effect on the work of other teachers.

A teacher who returns to his school with new information and new teaching skills is most likely to use them if he can employ them in his own classroom without disturbing the work of other teachers. If his new information and skills demand the creation of a new course for their full realization, he is most likely to get administrative permission for a course at the end of a sequence which will cause least disturbance to the work of other teachers.

It follows, then, that college courses, summer institutes, winter workshops, and other in-service experiences offered to *individual volunteers* will be most effective when they teach information and skills which teachers can take home and use *without disturbing the work of others*. It also follows that the use of voluntary courses to teach individual teachers such skills as how to produce television programs or how to act as leaders of teaching teams will not be as effective because these skills require *administrative intervention to modify the local school program before they can be employed*.

DECIDING TO CHANGE

Few new instructional programs are invented in any local school system. Most local changes involve a shift to a type of program which is in use elsewhere, although the program may of course be modified and adapted to local conditions. The decision to change to a different type of program is conditioned by a series of highly significant factors.

Professional suspicion about the value of innovations in other school systems, and even about the sincerity of other innovators, is a wide-

spread and serious inhibitor of educational change. Suspicion is an inevitable concomitant of efforts to disseminate new programs and is created in part by those very efforts. *Implication: Recommended new programs must be disseminated in a way which will allow the practitioner to quell his own suspicions.*

There is a strong disposition among administrators and teachers to suspect that many of the new programs which come to their attention are of little educational consequence—froth without substance—and may have been concocted by the sponsoring school largely in an effort to gain outside recognition. Suspect programs are usually thought to be “harmless for children” but lacking in any real advantage over current practice. If the new development is being actively advertised—by either educational or commercial organizations—additional suspicion is aroused. (The driving force behind the innovation is sometimes thought to be an administrator eager for a quick reputation and perhaps a better job.)

Many visits are undertaken for the purpose of discovering that the new program in a neighboring school is no better—and perchance a trifle worse—than what the home school is already doing. Such a discovery is deeply satisfying. It means that the local program to which administrators and teachers have devoted their daily labor is superior to an outside program which is being hailed as “advanced.” Thus it is not necessary to change the local program. More important, it has now become clear that *local children have been well served all along*. For a profession in which the feeling of rendering worthy service is a basic form of compensation, the latter finding is understandably gratifying.

Incidentally, the innovations which were visited and observed by the Consultant during the survey seemed to be uniformly honest efforts to educate children better. The new departures seemed to be accompanied but not dictated by a normal human desire for recognition. It is true, however, that the sponsors rarely knew for a certainty whether the novel approach actually improved learning.

The most persuasive experience a school person can have is to visit a successful new program and to observe it in action. Speeches, literature, research reports and conversations with participants outside the actual instructional setting are interesting but relatively unconvincing. *Implication: Recommended new programs must be demonstrated so that they can be observed in action.*

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different from conditions in the visitor's own school system—can rob a visit of persuasive effect. Implication: Recommended new programs must be demonstrated in schools quite similar to those from which visitors come.

The observer is extremely sensitive to any distinctive characteristics of the host school or community which might explain the apparent success of its new program. If the characteristics are unlike those of his own school, he is alert to the possibility that those very differences may explain the success of the program in its present location.

An essential purpose of the visit is to enable the observer to compare conditions in the two schools. He is especially wary of variations in mental ability of pupils, financial support of the program, physical facilities, make-up of the community, and characteristics of teachers.

If the observer finds that the conditions are abnormal, unreal, or artificial—that is, *different from his own*—he is likely to conclude either that the program cannot be duplicated in his own schools or that if duplicated it might fail. For this reason, people from a rural school district have little interest in visiting new programs in a large city; people in an industrial town have little interest in visiting a wealthy suburb; and so on. Although some people find value in observing programs in schools unlike their own, even they usually point out that it is much easier to imagine how the program might work at home if they have seen it under home-like circumstances.

In keeping with this viewpoint, people all across the State flatly rejected the idea of a centrally located, State-sponsored experimental education center for the demonstration of novel programs. Such a center, they believed, would provide an extremely artificial setting in which specially selected teachers and specially selected students, equipped with superior equipment and materials, would perform under extraordinary conditions. The motive behind the creation of such an experimental center was widely acclaimed, but the structure itself was rejected.

Similarly, and with equal vigor, almost everyone rejected the campus schools at the eleven State University Colleges as sites for the demonstration of innovations. They saw in the campus school a setting so different from their own that they could learn little from observing it. The campus schools are generally believed to have, by virtue of their State financing, a freedom from public control which sets them apart from public schools. The fact that they are located on college campuses and filled with student observers is also thought to make them distinctive. Finally, they are almost universally believed to have an extraordinarily capable student body drawn largely from favored homes. Their independence, their location, and the character of their students render them powerless to persuade the practitioner.

the Consultant, but of most of the teachers and administrators interviewed. Their remarks are paraphrased but faithful to the spirit of the original:

Speeches at professional meetings—The speaker is in the spotlight; he is representing not only himself but also his school. Everything he says will be carefully noted and may be widely repeated. He reacts by choosing his words so that he accentuates the positive and glosses over the negative. In his effort to gain recognition for himself and his school, he is likely to label his new program an unqualified success.

This kind of behavior is forced upon him by the situation itself, even if he is normally honest. In fact, the same person who tells only one side of his story while he is in the spotlight will freely admit the defects in the new program the moment he leaves the stage and starts talking informally with a few friends.

What all of this means is that the truth about innovations is not available from the platform.

Articles in professional journals—The man writing for a journal faces the same situation as the speaker at a meeting—and he reacts in the same way. He has an almost irresistible inclination to minimize the shortcomings of his own work. As they are reported in the journals, almost all educational experiments are a success. For that reason a magazine article is no more dependable than a speech.

Research reports—Education is difficult to measure. Research reports are usually uncertain in their conclusions, as most of them bend over backward to point out. As a matter of fact, research findings are often in conflict with each other. But even if a research study contains definite findings which agree with findings in earlier research, it has to be remembered that it is possible to do almost anything with statistics.

Conversations with participants outside the actual instructional setting—These can be quite useful, particularly if the person describing the program is a personal friend who can be trusted to give an honest description of it. However, there are many elements of a teaching situation which cannot be communicated by any sort of description. Even a conversation with a friend is no substitute for the actual observation of a program in action.

Observation of the program in action—The only way to judge a new program is to visit it. Of course the description given by the superintendent in his office or by the principal in his office cannot be taken at face value. It is necessary to go directly into the classrooms and watch the behavior of the students as they receive the instruction. A talk with the teacher afterward is very helpful. A talk with the students themselves can be even more revealing.

Anything abnormal, unreal, or artificial in the circumstances surrounding an observed program—that is to say, anything appreciably

INTRODUCING THE CHANGE

Once the decision to change has been made, the actual introduction of the new program gets under way. This is a complex process, conditioned in part by the way the decision was reached. Here are the Consultant's observations concerning it:

New instructional programs can be successfully introduced despite initial apathy or even opposition on the part of a number of teachers.

Implication: It is not necessary to wait until faculty opinion is unanimous before making a change in instructional pattern.

Faculty members ordinarily begin to prefer new methods within four months to a year after a novel program has been introduced, regardless of their very early reactions. There is usually an initial period during which the staff reserves judgment, but doubt diminishes with experience and many programs are being enthusiastically endorsed in a matter of months.

If new programs are generally preferred to old ones within a short period of time, something uniform must take place during the early months of most innovations to cause their acceptance. It seems reasonable to believe that what happens is simply this: teachers learn how to do the new job; they then feel competent and secure.

It became evident during the survey interviews that proposed innovations arouse feelings of insecurity and inadequacy in many teachers. The more radical the change in content or method, the more likely teachers are to feel inadequate.

Feelings of inadequacy and doubt should be distinguished from outright resistance to change. The early questions, doubts, and hesitations teachers express when innovation is imminent should not automatically be labeled as *resistance*. Their feelings are more likely to be an anxious response to uncertainty, according to the information gathered during the survey interviews. Schools which were sensitive to those anxieties relieved them by providing teachers with information, reassurance, the promise of help—and direct experience in teaching the new program.

Teachers and administrators alike enjoy telling case histories of new programs which "began in the central office and ended before they reached the classrooms." The customary moral of such stories is that teachers must share in making decisions if they are expected to carry them out, or else they will consciously or unconsciously "sabotage" those decisions. In his visits, the Consultant found countless situations in which teachers had not been taught how to handle a new approach; he found very few in which they continually attempted to sabotage a program *after it had been introduced*.

tions, or College Board examinations, the data are inspected with interest but are almost never regarded as conclusive in and of themselves. For example, if achievement test results show little or no difference as a result of the new procedure (which is what they usually show) but students nevertheless respond to the instruction with interest or enthusiasm, the method is judged to be superior to what went before.

The degree of student enthusiasm, along with the opinion of the teacher, is used not only to determine whether the method is effective with students of a given type, but also to decide *whether the particular body of content and skill should be taught at a given grade level—or should be taught at all.*

What all of this means is that *pupil reaction is considered sufficient as a criterion of instructional success.*

Some people have suggested that pupil reaction is, after all, a superior criterion for measuring instructional innovation. What would be better, they ask? Indeed, what alternative is there? They point out that it would be a mistake to judge a new program by achievement tests when they measure a narrow strip of skill and knowledge whereas the program may have broad objectives. They say that long-range results, admittedly the best criterion, are too complex to measure and too distant to help with today's decisions.

Certain of these points could be argued. What cannot be argued, however, is the fact that when new instructional programs are invented, an adequate method of evaluating them is not invented simultaneously. A school using a new program thus has the choice of either measuring it with the wrong yardsticks or else making a rough subjective estimate of its value by observing pupil response. Neither alternative is adequate for a statewide program of accelerated instructional change. Something better will have to be designed.

Instructional innovations usually seem to the people using them to be distinctly better than what they were doing before. Implication: The reactions of users cannot be relied upon as the sole method of evaluating novel approaches.

Teachers and administrators involved in new instructional efforts almost always express praise for the results. The Consultant found this to be true in the survey interviews as well as in some 1500 brief descriptions of promising programs submitted for the *Commissioner's 1961 Catalog of Educational Change*.

It would seem that almost everything new works better. In fact, regardless of whether a given approach had been adopted or abandoned, the change was usually reported as an improvement. It was possible to find

teachers doing things they had never done before. It did not take long to discover that those who taught a new elementary mathematics or foreign language program with ease and flexibility were those who knew more math or language than the program called for. It was equally evident that those who followed written material with lock-step precision were those who had not been educated out beyond it.

Many of the newer instructional approaches now being introduced claim to bring greater flexibility to the teaching process. If the potential contribution of these approaches is to be fully realized, teachers must be taught more than is strictly required to go through the motions of the novel approach. Otherwise many of them will be unable to do anything but use the new content and method in a slavish, mechanical fashion.

EVALUATING THE CHANGE

Soon after an instructional innovation has been introduced, judgments begin to be made about its success. Regardless of the nature of the change or the type of school setting in which it is made, one particular evaluation procedure consistently overshadows all the others.

Instructional innovations are almost always evaluated by observing the reactions of the students while they are receiving the new instruction. In the eyes of the practitioner, no other evidence outweighs student reaction as a measure of success. More complex evaluative techniques are rarely used. Implications: (1) Local school systems cannot be expected to generate, on their own initiative, anything more than observational evidence of the value of their innovations. (2) Observers who visit demonstrations of recommended new programs should be given an opportunity to talk with students about their reactions to the new instruction.

Instructional procedures to which students react with interest or enthusiasm are ordinarily judged to be successful. Few programs are given a more intensive evaluation. Few school systems require anything more intensive before concluding that the new approach should be spread into other classes and other grades.

The direct observation of pupil responses is the primary method of assessing not only programs which are observed briefly in visits to other communities, but also in judging local programs which presumably could be subjected to a far more thorough analysis.

Even if the normal operation of the school produces pertinent information, such as scores on standardized achievement tests, Regents Examina-

two school systems which had, in effect, "traded" programs in that each one adopted a program which the other had discarded. Both were likely to report better results.

Some people are inclined to attribute this widely-recognized phenomenon to the excitement of breaking up old patterns and building up new ones. "Change is stimulating in itself—anything that gets you out of a rut helps you do a better job," they say.

Others seem to believe that by participating in the decision to adopt a new approach, the staff builds up a commitment to it, a determination to make it a success. "Our staff worked hard to get this new program started—naturally they want it to work," people explain. (The widespread use of participation machinery springs to mind here.)

Without denying the stimulating effect of change in and of itself or the importance of a determination to make something work, the Consultant identified another factor which seemed to be even more powerful. It is reported below.

The attention, encouragement and recognition given to teachers by people outside the classroom during the introduction of new programs are among the strongest causes of their success. *Implication: In evaluating new programs, attention, encouragement and recognition should be supplied equally to both the experimental and the comparison settings.*

When a school program is changed, people outside the classroom begin to watch it closely. The principal may observe classes more often ("innovations are almost always evaluated by observing the reactions of the students"); he may send in visitors from other schools; a specialist may come in to give additional tests; the teacher may be given free time to study or prepare to use the new techniques, permitted to visit other schools, or encouraged to describe the program from public or professional platforms.

Classroom teachers normally work in such isolation that this kind of outside attention can scarcely fail to have an exhilarating effect. That attention predestines the success of many innovations. This may explain a point made above about the stimulating effect of change itself and about the value of a determination to succeed. Perhaps outside attention is what makes a change stimulating and perhaps outside recognition is what makes teachers determined to succeed.

In any case, simply paying attention to what teachers are doing apparently can improve their teaching. Almost any outside adult seems to exert a positive influence: the principal, another teacher on the same team, a research worker, a teacher's aide, a student teacher, or a parent. During the survey interviews administrators frequently shrugged off any unique

Advance scouts
Progressists
Non-Parochials
Experimentals
Cultural *Avant-garde*

Whatever they are called, there is need for a standard definition of what an innovator is. Because adopter distributions usually appear to approximate a normal, bell-shaped curve over time, I have elsewhere⁴ suggested that our standard means of categorizing innovators is to regard them as the first 2.5 per cent of an audience to adopt a new idea. This means they are to the left of the mean (\bar{X}) time of adoption minus the standard deviations (\bar{O}). Figure 1 shows the position of innovators on the normal adoption curve.

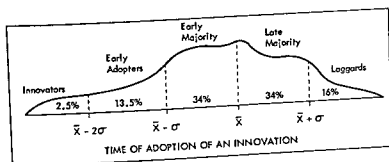


Figure 1. Innovators as the First 2.5 Per Cent to Adopt a New Idea. (Source: Everett M. Rogers, "What Are Innovators Like?" from *Change Process in the Public Schools*, Richard O. Carlson, et al., p. 56. Copyright 1965 by the Center for the Advanced Study of Educational Administration, University of Oregon. Reprinted by permission of the Center for the Advanced Study of Educational Administration.)

TIME-SPAN OF ADOPTION

Even though the distribution of the adopters of a new idea over time appears to closely approach normality in the cases subject to past research, the rate of adoption has been found to vary widely in terms of years or some other time-unit. In other words, the period of years from first to last adoption (from extreme left to extreme right in Figure 1) varies widely.

Mort emphasized the relative slowness with which educational practices were adopted by school systems.⁵ He found the average school "... lags 25 years behind the best practice." This 50 year time period from first innovator to last laggard may well be a function of the educational practices selected for study, the units of analysis (public high schools), and/or the

⁴ *Op. cit.*, p. 162.

⁵ Paul R. Mort, *Principles of School Administration*, N.Y., McGraw-Hill, 1946, pp. 199-200.

WHAT ARE INNOVATORS LIKE? *

Everett M. Rogers

Innovators are the first members of a social system to adopt new ideas.¹ Research studies of farmers, school administrators, industrial firms, and aborigines indicate that they are not always the most respected members of their social system. They prefer venturesomeness to the respect of their peers, who call them "starry-eyed," "experimenters," or people with their "heads in the clouds."² Because of their important role in fostering change and their prominence among their peers, innovators are of both theoretical and practical interest. In fact, I would maintain that an understanding of the behavior of innovators is essential to a comprehension of the central processes of social change.

PURPOSE

The objective of the present paper is to isolate the characteristics of innovators with special reference to the process of social change. First, however, we must give some attention to how innovators are selected from a total audience that also contains non-innovators.

WHO ARE INNOVATORS?

A great variety of different terms³ have been used in past research for innovators . . .

Pioneers

Lighthouses

* FROM *Change Processes in the Public Schools* by Richard O. Carlson, Everett M. Rogers, et al., pp. 55-61. Copyright 1965 by The Center for the Advanced Study of Educational Administration, University of Oregon. Reprinted by permission of The Center for the Advanced Study of Educational Administration.

¹ Certain ideas in the present paper are similar to Everett M. Rogers, "What Are Innovators Like?" *Theory Into Practice*, 2:252-256, 1963.

² Ross, Donald H. (editor), *Administration for Adaptability*, New York: Metropolitan School Study Council, 1958, p. 21. The quoted references are among terms listed by Ross as "only mildly complimentary."

³ These terms are taken from a review of past research in Everett M. Rogers, *Diffusion of Innovations*, New York: The Free Press of Glencoe, 1962, pp. 150-151.

The description of innovators is sharpened by contrast to that of laggards, who are the last to adopt an innovation (Figure 1). Laggards are localistic; many are near-isolates. Their point of reference is the past, and they interact primarily with those peers who have traditional values like theirs. Laggards tend to be frankly suspicious of innovations, innovators, and change agents. When laggards finally adopt an innovation, it may already be superseded by another more recent idea which the innovators already are using. While innovators look to the road of change ahead, the laggards gaze at the rear-view mirror.

GENERALIZATIONS

Perhaps a meaningful way to more precisely "boil down" the salient characteristics is in terms of a series of generalizations.

1. *Innovators generally are young.* Since the young are less likely to be conditioned by traditional practices within the established culture, there are theoretical grounds for expecting them to be more innovative. Research studies on farmers provide actual evidence that innovators are younger than their peers who are later adopters.

2. *Innovators have relatively high social status, in terms of amount of education, prestige ratings, and income.* Affluence may be indicated by a high income, by ownership of a large-sized operation, or by possession of wealth. Ross reviewed a number of studies dealing with the diffusion of educational ideas among public schools. He concluded that the wealth factor was the one variable most closely related to adoption of innovations.⁸

3. *Impersonal and cosmopolite sources of information are important to innovators.* At the time innovators decide to use a new idea, few members of their social system have had experience with it. As a result, innovators must secure new ideas through impersonal sources, such as the mass media, and from cosmopolite sources, or from outside the social system. Coleman and others found that physicians who innovated were more likely to attend out-of-town medical meetings.⁹ Carter and Williams found that innovative industrial firms were more likely to seek new ideas from university researchers.¹⁰

4. *Innovators are cosmopolite.* The cliques and formal organizations to which they belong are likely to include other innovators. They travel widely and participate in affairs beyond the limits of their system. Ryan and Gross

⁸ Ross, *op. cit.*, p. 119.

⁹ Coleman, James, Katz, Elihu, and Menzel, Herbert, "The Diffusion of an Innovation among Physicians," *Sociometry*, 20:253-67, 1957.

¹⁰ Carter, C. F., and Williams, B. R., *Industry and Technical Progress*, London: Oxford University Press, 1957.

time of the study (the late 1930's and 1940's). Some educational practices certainly spread more rapidly today. For example . . .

1. Allen compared the diffusion of driver training, an innovation promoted by safety groups and car dealers, with the idea of pupils studying their community.⁶ Sixty years were required for this idea to reach 90 per cent adoption among 168 U. S. schools while only 18 years were needed for driver training to reach this level of adoption.

2. Carlson found that "modern math" only required five years to reach about 90 per cent adoption by 43 school superintendents in Allegheny County, Pennsylvania.⁷

In any event, while exact comparison is rather difficult (how equivalent is 2,4-D weed spray to language laboratories to antibiotic drugs?), it appears that our schools change more slowly than our farms, our medical doctors, or our industries. Later in this paper we shall return to discussion of this time-span comparison in terms of implications for school administrators.

Let us first look at what we know about innovators.

A WORD-PICTURE OF THE INNOVATOR

Although, for the present paper, I have drawn primarily on research on the diffusion of innovations in such diverse fields as rural sociology, industrial engineering, and anthropology, I have featured findings on educational innovators when such data are available.

Innovators are venturesome individuals; they desire the hazardous, the rash, the *avant-garde*, and the risky. Since no other model of the innovation exists in the social system, they must also have the ability to understand and use complex technical information. An occasional debacle when one of the new ideas adopted proves to be unsuccessful does not disquiet innovators. However, in order to absorb the loss of an unprofitable innovation, they must generally have control of substantial financial resources.

Their propensity to venturesomeness brings them out of their local circle of peers and into more cosmopolite social relationships. Even when the geographical distance between them may be considerable, they often have been found to form cliques. They spread new ideas as their gospel.

⁶ Harley Earl Allen, *The Diffusion of Educational Practices in the School System of the Metropolitan School Study Council*, D.Ed. Thesis, N.Y., Teachers College, Columbia University, 1956.

⁷ Richard O. Carlson, "School Superintendents and Adoption of Modern Math: A Social Structure Profile," in Matthew B. Miles (ed.), *Innovation in Education*, N.Y., Teachers College, Columbia University, Bureau of Publications, 1964, p. 333.

graduates. A fairly high median (educational level) has been attained by those who are 25 years of age and older in the community. A low percentage of the population is foreign born. It has a high level of understanding of what schools can do. This community is part of a super community which offers many cultural advantages and which contains other schools interested and actively engaged in promoting more adaptable schools.¹⁷

IMPLICATIONS FOR RESEARCH

Perhaps one implication of the present paper for educational research is that there is not enough of it. Undoubtedly one reason for the relative slowness of educational adoption when compared with agriculture, medicine, or industry is the absence of scientific sources of innovation in education. Chemical companies and the vast network of agricultural experiment stations provide accurate measurements under controlled conditions for a new idea. Farmers, as a result, develop credibility for agricultural research as a source of innovations. Education, on the other hand, has only campus or university schools, and those classes in the nation's schools willing to co-operate in experimentation. Here, first responsibility is to the student, not to research. And the results of educational research are often ambiguous, incomplete and confusing.

I would argue that in conjunction with research to develop educational innovations, we need study of how these new ideas spread and are adopted. Our past research in educational diffusion has been rather unimaginative, and has been the almost sole property of one university. Few studies have been completed with teachers (only one such study was encountered in a search of the literature) as the unit of adoption, and only one study of school superintendents, in spite of their importance in school adoption decisions.

IMPLICATIONS FOR SCHOOL ADMINISTRATORS

Research findings reported in the present paper furnish several implications for school administrators.

1. A high relationship has been found between the financial resources of a school system and its innovativeness. In fact, outstandingly innovative school systems are usually located in particularly wealthy

¹⁷ Kumpf, Carl H., *The Challenge of Studies of Adaptability to an Elementary School in a Large City*, D.Ed. Thesis, Teachers College, Columbia University, 1949, pp. 13-15.

found that hybrid-corn innovators traveled more often to urban centers such as Des Moines than did later adopters.¹¹ Carter and Williams found that in innovative industrial firms "There is extensive world-wide travel by executives and a lively interest in progress at home and abroad . . ." ¹² Ross reported that teachers at more innovative schools usually acquired new educational ideas from outside their community.¹³ Goldsen and Ralis found that Thailand farmers who innovate visited Bangkok.¹⁴

5. *Innovators exert opinion leadership.* Because of their prior experience, innovators obviously are in a position to influence the adoption decision of their peers. Several studies have shown, however, that the norms of the social system may act as an intervening variable between innovativeness and opinion leadership. For example, in communities where the norms were traditional, innovators were not looked to by their peers as sources of information and advice.¹⁵

6. *Innovators are likely to be viewed as deviants by their peers and by themselves.* Research studies show that farmers who innovate are perceived as deviants from the norms of the social system.

An Ohio study asked what their neighbors thought of their farming methods.¹⁶

"Sometimes they shake their heads,"

"Fifty per cent *think* I am crazy;

the other 50 per cent are *sure* I am."

Thus, as Thoreau might observe, innovators are in step with a different drummer than their peers; they march to different music.

A composite word-picture of the innovator as represented by the school system is provided by Kumpf:

"An adaptable school tends to be located in a community which has many people represented in the white-collar or professional occupations, has a high percentage of owner-occupied dwellings, and has many inhabitants 50 years of age or older. It tends to be high in per capita wealth, per pupil expenditure for education, per cent of 8th grade, high school, and college

¹¹ Ryan, Bryce, and Gross, Neal C., "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," *Rural Sociology*, 8:15-24, 1943.

¹² Carter, C. F., and Williams, B. R., "The Characteristics of Technically Progressive Firms," *Journal of Industrial Economics*, 7:97, 1959.

¹³ Ross, *op. cit.*

¹⁴ Goldsen, Rose K., and Ralis, Max, "Factors Related to Acceptance of Innovations in Bang Chan, Thailand," Southeast Asia Program Data Paper 25, Ithaca, New York: Cornell University, 1957.

¹⁵ Marsh, C. Paul, and Coleman, A. Lee, "Farmers' Practice-Adoption Rates in Relation to Adoption Rates of 'Leaders,'" *Rural Sociology*, 19:180-81, 1954.

¹⁶ Rogers, Everett M., "Characteristics of Innovators and Other Adopter Categories," Research Bulletin 882. Wooster: Ohio Agricultural Experiment Station, 1961.

are ignorant of its existence, or apathetic if not hostile, it tends to remain outside the blood stream of the school."²⁰

Setting the Climate for Change

The key person in a school improvement program is the administrator. He can affect the school spirit, character, resources, morale, and purposes more than anyone else. He is the key person in encouraging teachers to experiment and to invent new practices. He creates the climate for change. The next selection gives guidelines for the administrator who desires to encourage the development of the unique qualities of each pupil. Many of the suggestions are applicable to other types of innovation.

THE CLIMATE OF LEADERSHIP: WHAT SCHOOL LEADERS CAN DO *

Although the previous section has already presented a checklist on the administrator's role, it seems appropriate still further to emphasize the importance of leadership, whether it is that of a principal, supervisor, curriculum director, assistant superintendent, or superintendent. The school's spirit, character, resources, morale, and overriding purposes are affected by such leaders more than by anyone else.

Although the professional leader reflects the hopes, the professional beliefs, and the considered judgments of the staff, his spirit, his values, his administrative skill, and his overall leadership make for success or failure. More than anyone else, he determines the new horizons and lifts the sights of his associates. More than anyone else, he has the power to encourage or discourage. More than anyone else, he can pull together the threads of the planning, thinking, and evaluating of his associates and make whole cloth of them.

His is the obligation to open doors, release the imagination of his teammates, and recognize special aptitudes, differences, and unique qualities. If he values and respects these differences and special qualities while build-

²⁰ Demeter, Lee H., *Accelerating the Local Use of Improved Educational Practices in School Systems*, D.Ed. Thesis, Teachers College, Columbia University, 1951, p. 23.

* FROM *A Climate for Individuality*, by the American Association of School Administrators, Association for Supervision and Curriculum Development, National Association of Secondary School Principals, and National Education Association Department of Rural Education, pp. 53-56. Copyright 1965. Reprinted by permission of the Associations and the NEA Department of Rural Education.

communities.¹⁸ At the same time, however, it is important to remember that not *all* rich schools are innovators and that not *all* schools that innovate are rich. The community's attitude about providing support for the school's costs is obviously an important intervening variable between community wealth and school innovativeness.

As Pelley pointed out, "Unfortunately, there seems to be no possible profit motive in being an educational innovator."¹⁹ The primary motive for more innovative schools must come through the community's desire for more effective learning by their children. However, the amount that learning increases as a result of adopting innovations is difficult to measure. Nevertheless, wherever possible, school administrators should emphasize to the community the results of benefits of educational innovations.

2. The social characteristics, social relationships, and communication behavior of the members of the school staff undoubtedly relate to the innovativeness of their school system. Administrators may create an innovative staff by choosing teachers, possibly young, with breadth of training and cosmopolite sources of information and travel patterns.
3. As the teacher may affect the innovativeness of the school system, so the school system, through its policies, may affect the innovativeness of the teacher. It has been found, for example, that teachers who attend out-of-town educational meetings are more innovative. This suggests that sending teachers to workshops, conferences, and lectures, where they may be exposed to new educational methods, may be a wise investment.
4. The absence of agents that promote change may be a factor in the relative slowness with which schools adopt innovations. Certainly the relatively more rapid adoption of farm innovations is related to the activities of the county extension agent and the agricultural salesman—both important links between agricultural research and the farmer.

The crucial role of school administrators in causing a school to be more or less innovative warrants special emphasis. Innovative school administrators might be expected to maintain close contact with laboratory or experimental schools and with universities through enrollment in graduate work or attendance at conferences and workshops. Demeter concluded, "Building principals are key figures in the process. Where they are both aware of and sympathetic to an innovation, it tends to prosper. Where they

¹⁸ Although this is not always true, as Carlson (*op. cit.*, p. 340) has demonstrated. He found a correlation of $-.02$ between time of adoption of modern math and annual school expenditure per pupil.

¹⁹ J. H. Pelley, *Invention in Education*, D.Ed. Thesis, N.Y. Teachers College, Columbia University, 1948, pp. 170-171.

experiences and backgrounds, those who add zest and spice to the school faculty, those who are creative, those who desire to experiment, those who are scholars, those who have respect for individuals?

2. Is the administrator unduly concerned about equal preparation and identical scope of preparation of all teachers? Or is he ready to recommend employment of the individual who is likely to become highly individualistic in his approach to teaching and learning?

3. A fruitful way of directing attention to the need for individuality in children is for the administrator to assess with his staff the degree to which he and members of his staff are individuals themselves. Does he ask himself, how do I differ? Does he stimulate staff discussion on the question of how staff members differ, in an attempt to determine the unique contribution each staff member can make and to assist in locating any lacks of balance in the staff?

4. The process of recognizing and assessing differences in ourselves tends to make us more cognizant and respectful of differences in others. Is such versatility sought for and recognized in the staff?

5. Conformity to existing conditions, uniformity of operations, rigidity, and undue regulations tend to suppress individuality. If the staff is restricted, children are stifled. Do the administrator and his staff challenge existing operations and programs? Do they keep restrictions to a minimum? Do they avoid regimentation and make exceptions?

6. A faculty engaged in research and new ventures is likely to be friendly to individuality. Does the administrator encourage experimentation? Does a spirit of inquiry permeate the staff? Is staff time allowed for planning and carrying out new approaches to learning? Are occasional failures recognized as inevitable occurrences in the course of true experimentation?

7. The administrator's attitude toward change can permeate a whole school. Does the administrator use his influence so that change is not only expected but looked for and anticipated? Does he encourage unorthodox approaches to learning? Does he convey the impression that the environment can be modified?

8. Does the administrator stimulate and encourage his staff to find and nurture individual differences? Are teachers encouraged to expect and diagnose differences rather than to look for likenesses?

9. Does the administrator from time to time confer with representative teachers, asking such questions as: What is the most important thing this pupil should learn? What are his unique qualities and how can they be woven into the fabric of learning experiences? Do we really know children until we discover how they differ?

ing bonds of unity and areas of common purpose, his leadership is strengthened.

The educational leader is a key factor in encouraging teachers to experiment, to invent new ways of finding the peculiarly different attributes and interests of learners, and to develop new ways of stimulating and releasing the creative potentials of pupils. In fact, the leader "casts the spell" which invites the individual teacher to become excited, to be professionally rewarded, and to gain satisfaction from deep involvement in studying the problems inherent in teaching the individual child.

What a thrilling experience it is when a group of educators set out to learn, if they can, why some teachers stimulate some learners to creative production while at the same time inhibiting others. From such study the curriculum worker or the administrator can join with teachers in tryouts of unorthodox approaches to learning and teaching. In an atmosphere of experimentation and unceasing search for improvement, the whole staff can share understanding and develop unity of spirit and purpose while preserving and holding sacred the diversity to which each staff member is entitled.

One of the most rewarding roles that falls to the lot of the educational leader is that of helping the staff draw up and approve policies and goals relating to curriculum, instructional materials, school and class organizational structures, pupil groupings, pupil management, pupil opportunities, roles and responsibilities of various staff positions, and other aspects of the school's total complex. Although the special roles, abilities, and goals of each staff associate will be protected by the school superintendent, supervisor, or principal, the overall purposes of the school system serve as a unifying and stimulating force. They serve best when developed by the total professional staff.

THE ROLE OF THE SCHOOL ADMINISTRATOR

No other single person does as much to set the tone and basic direction of a school or school system as the administrator. If individuality is to be encouraged, he must play a key role. To provide for individual differences, the administrator needs a basic understanding of people and the resources to meet their varying needs. He has to have a compelling desire to provide appropriate opportunities for both teacher and pupil.

In conclusion, the considerations which follow are recommended as guideposts for the administrator who has as his overriding goal the encouragement of the unique qualities of each pupil:

1. One of the administrator's most important assignments is the selection of staff. Does he unconsciously seek to re-create his own image as he interviews applicants or reviews their qualifications? Or does he deliberately draw into the fold those who may differ with him, those who have unusual

creative organization must evolve which can determine its goals, relate goals to needs, make decisions, adapt itself, and get the job done. Strategies must be developed for stimulating ideas on an intellectual basis, for modifying attitudes, for building positive human relations, for re-education, for drawing on outside resources.

Program development, the companion of organizational development, must at the same time be intensively cultivated if we are to attain the new kind of school. .

To move on all fronts simultaneously will require careful study, preparation and deliberate action. Specific suggestions follow:

A. ORGANIZATIONAL DEVELOPMENT

To speed up internal change processes in the University City school system direct attention would be paid to the state of the organization and to restructuring of the organization through a sustained study of organization and administration in the change process.

There are many signs that the present organization of the local school system is in a healthy state. It has expressed its goals, stepped up communication and encouraged the flow of ideas horizontally and vertically. It encourages innovativeness, has a high level of morale among its members, is adaptive and has set up procedures for solving problems.

On the other hand the local school system suffers from problems of organization that are common to all schools. For example, philosophical goals and classroom procedures are not always in harmony. The organization tends to evaluate only one aspect of its goals: academic learning. It has engaged very little in evaluating its many philosophical goals.

In the past there has been a tendency toward separateness of parts of the organization with separate departments, subjects, classrooms, buildings operating in isolation from the rest of the organization. Not only a wide range of competencies and motivations exists among the children of the school but also among the teachers and administrators. More attention is also needed to development of lay awareness of the needs of the school.

Not enough attention is being given to the adaptation of the program to the changing needs of society. For example, the school, an organization of prime importance in a technological society, makes very little use thus far of technological resources.

It would be a fair statement to observe that, while the organization of the University City school system is in a relatively healthy condition, it suffers from the use of outmoded organizational concepts and structure.

Organizational restructuring would come about through a planned and intensive program centered around organizational self-study and self-directed change, team relationships, heightening of communication.

10. Knowing that teachers, working with pupils 180 days of the year, will discover how their pupils differ, does the administrator recommend that their findings and observations be made a matter of record? Do the administrators and faculty together prepare case studies and evaluate cumulative records? Do they examine together the developmental history of each pupil in order to learn how to observe and sort out each pupil's excellences and limitations and to appraise unmet needs? Are the records rewritten as pupils change behavior and attitude?

11. Are the administrator and staff aware that parents and others in the power structure of the community may be fearful of any program which accentuates differences? Do they encourage members of the community to speak out? Do they accept it when pupils do the same? What program is designed to permit community leaders and faculty to study together the whole matter of the school's responsibility to develop the uniqueness of each pupil?

Implementing in the Process of Change

The final selection in this chapter is taken from an action program where change is taking place. The University City School System, University City, Missouri, is inducing change within the total school system. In addition to the regular administrators who are working as innovators, a change agent has been hired to serve as a catalyst and to provide assistance as required. The complete report "Envisioning a New Kind of School" is filled with practical suggestions that every innovator should read. However, because of space limitations, only the section entitled "Proposed: An Action Program" is presented herein. The innovating principal will find many practical ideas as well as procedural steps in this action program.

PROPOSED: AN ACTION PROGRAM *

University City School System

The "new kind of school" can only be brought into reality by focusing on the organizational dynamics involved in change. A dynamic, innovative,

* FROM *Envisioning a New Kind of School* by University City School System, University City, Missouri, 1965, pp. 18-29. Reprinted by permission of University City School System

to reach collaborative new targets for each individual's work and personal development. The focus of attention here would be the working relationship between leadership person and each staff member with improved trust, feelings of support and better and more satisfying communication and role performance. It is expected that both the leader and the staff member would grow mutually through these conferences. Supporting activities would be provided for the individual including consultation services, self-directed data collection, workshops, etc. (This type of appraisal is presently in operation in our school system.)

e. **SYMPOSIA FOR THE TOTAL STAFF.** Periodic general meetings would be held for the total staff so that an interchange of ideas between the staff and outside experts would provide opportunities to review what has been done so far, assess the present status and look forward to the immediate future. Smaller planning groups would design continuing action. Feedback surveys would provide further means of analysis and would lead to further clarification and problem-solving activity.

2. Team Relationships

The approaches that are suggested here for organizational restructuring do not conceive of the organization as a collection of jobs with isolated persons in them but as a network of team groups and role relationships. It would be the functioning of these groups and relationships which would require examination and self-operated alterations. The aim of the organizational restructuring would not be to turn the spotlight on Mr. X's attitude but to focus on the team relationships and group settings in which Mr. X operates and in which his attitudes and attitudes of others may be revised as members of the team.

3. Communication

Organizational restructuring involves the heightening of communication vertically, diagonally and horizontally. New feedback opportunities would be built into this system. Outside expertise would be called on to study and redesign the communication process.

4. Effective Use of Experts

All of the stages of organizational restructuring would include the utilization of outside experts. The main functions of these consultants would be to facilitate, provoke and support the efforts of the organization to understand itself; to improve communication; to engage in problem-solving behavior; and to expedite the process of change. Consultant help would

concentration on bringing goals and action into harmony, and effective use of outside experts.

I. Organizational Self-Study, Self-Directed Change

Approaches involving conferences, seminars, symposia, workshops and retreats would be carefully planned in sequences to build on one another. Following are several examples:

a. **ADMINISTRATIVE TEAM TRAINING.** The superintendent and administrative personnel would meet for a period of several days away from their offices with consultant help. They would examine their own effectiveness as a problem-solving team, the role of each member in the group and how it affects the group, and the person himself and the operations of the group in relation to the organization. The members would be trained to deal with internal conflicts in the team, learn to solve problems more effectively as a unit and increase their ability to meet the demands placed upon them by other parts of the organization. (For an example of this type of team training, see Blake and Mouton, *The Managerial Grid*, or Argyris, *Integrating the Individual and the Organization*.)

b. **ADMINISTRATIVE CONFERENCE FOR ORGANIZATIONAL DIAGNOSIS AND PROBLEM SOLVING.** The administrative members of the organization would meet for periods of several days in intensive sessions to identify problems facing the system, reasons for the problems, invention of possible solutions, decisions on system changes and planning of implementation. The conferences differ from the team training described above in that they are focused on the organization and system problems rather than on team relationships and interpersonal effectiveness within the administrative team. The organizational diagnosis and problem-solving conferences would result in the development of new norms for the organization and meaningful changes in the structure and function of the permanent system. Follow-up work sessions and seminars for task forces would ensue.

c. **PEER WORKSHOPS.** Principals' workshops, resource teachers' workshops, coordinators' workshops, team teaching workshops and other types of workshops for persons in the same role would, hopefully, result in better performance of the particular role and more "self-actualized" behavior. The workshops would focus on role clarification and role effectiveness and by sharing common problems would develop alternative solutions.

d. **INDIVIDUALS.** Conferences between each staff member and his administrative leader would be held for the purpose of reviewing the work of each individual in relation to both organizational and personal goals and

be withdrawn as the organization itself develops the self-corrective process which had been begun through these approaches.

B. PROGRAM DEVELOPMENT

With attention directed to organizing for planned change, it is our assumption that system-wide program development leading toward the new kind of school can take place more readily. Many forces to effect change in the program must be brought to bear on the problem. These include new dimensions of in-service education, professional outreach, curriculum design, extension of the unique early childhood program, citizen-teacher dialogue, new ways of inducting new teachers, new uses of technology and extension of research and evaluation procedures. Each of these is discussed in some detail in the following paragraphs.

1. New Dimensions of In-Service for the Total Staff

Professional staff members, both old and new, simply do not have from their pre-service and in-service experiences the kinds of competencies demanded to implement effectively the knowledge and procedures to develop the school of the future. The need to fulfill this deficiency in the total spectrum of educational need may be the single most urgent need and the one for which most assistance is needed.

The motivating power of "peer supervision" (mutual planning, working, critiquing) could be brought to bear on in-service at all levels. Possible solutions might include the following:

a. The employment of several more persons (teachers, administrative interns, and aides) than are needed in the traditional organization. Innovative persons would be matched with traditional ones in teaming situations, master teachers with new ones. Through a network of teams of many interests throughout the school system, many more people would become competent with experimentation, with the new curriculum programs, with the inquiry method, with the new theories of learning, with flexible scheduling arrangements, and with the use of technology and resources. Time would be scheduled into the day for staff members of all levels to work together in small groups or teams on program development.

b. A comprehensive program involving the majority of the professional staff during the two summer months would provide the much needed opportunity for every one to be involved in the development of the new kind of school. Such a block of time may be required to make a significant difference in the level of competency required for the kind of program envisioned.

c. Specialized in-service programs would be needed for guidance per-

be offered a program designed to develop the skills of information processing, the spirit of inquiry, thought processes, an approach to curriculum which reveals the structure of the discipline, basic concepts in each subject field and offers the student opportunities to develop judgment and to select wise options as he moves through school. Throughout the school a climate of warmth and encouragement would prevail.

Curriculum development, processes in education and diagnosis of the child's stages of development with appropriate programming would be tied together and combined with teacher education on the job.

5. A Systematic and Thorough Program to Promote Citizen-Teacher Dialogue Related to the School We Need

Related to the nature of the public school and its natural and desired involvement with lay citizens, it may not be possible to hasten educational changes significantly without a different concept of citizen education.

This might take some of the following forms:

- a. The employment of a corps of personnel highly trained in education and public relations to work systematically at this target for a sustained period of time.
- b. Seminars, cottage meetings, visits to homes, work with organized community groups.
- c. Particular emphasis on parent education within the early childhood program.

6. Induction of New Teachers

Experimentation in this field, now in progress in University City, would be expanded and become an integral part of the program. At present we are conducting a pilot project in which a psychologist conducts seminars with new teachers for the purpose of developing self-understanding and self-awareness. Nondirective and inductive methods are used so that new teachers may themselves develop generalizations.

New teachers are also matched in teaming situations so that they can work closely with the more dynamic innovative teachers. This effort would be extended and the load of new teachers would be reduced sufficiently in the classroom to permit time for them to take part in tailored in-service designed to develop the teacher we need for the "new kind of school."

The school system would also serve as a laboratory in which universities in the St. Louis area would cooperate with the school system in studying the knowledge that must be taught and the best ways to teach it. Preparation of teachers in the metropolitan area would be enhanced and a supply for our local school system would be improved.

education. More than normal expenditures should be placed in this area. The employment of research assistants would serve to hasten the process of change.

The School District of University City could offer itself as a laboratory for research and development to which visitors from other schools would be welcome. We hope to expand our exchange of ideas with other schools.

3. A New Approach to Early Childhood Education

Success in school and later in life may be largely determined by the extent to which the child's perceptual and intellectual functions are developed during the critical years between age four and age eight. This is the assumption on which University City is engaged in unique early childhood pilot project. Each kindergarten child on entering kindergarten is diagnosed with modern tools to assess the developmental stages of his motor, auditory, visual, verbal and cognitive functions. The kindergarten program is personalized to develop each function at this vital period of life.

We propose to extend this pilot project into the entire school system and design a program extending up through the school years and down into the preschool years with consultative services to parents of children aged three and four.

A small staff will be required to develop this program.

4. Development of an Interrelated Curriculum Design Based on the Structure of Knowledge, the Nature of Inquiry and the Developmental Growth of Children

We propose to design a program in which we attempt to match the development of perceptual and thought processes in children with the development of the curriculum. An examination of the studies of Piaget, Bruner, Hunt and others reveal to us that if schools can match new insights into the curriculum and new insights into the development of perceptual and intellectual powers of children, we can move into a new era in education.

In the past we have probably done children a disfavor by setting up a kindergarten program which "followed the child's interests," was loose and unstructured and permitted much freedom. As he moved along in school he encountered less and less freedom, a tightening of restrictions, and an attempt as he came through high school to compress him into a somewhat narrow curriculum program.

We propose to reverse this process. As the child enters kindergarten (and earlier if possible) we propose to assess his developmental levels, to offer a program structured to develop his perceptive and intellectual powers and to develop his autonomy. As he moves along through school he would

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- TRUMP, J. LLOYD. "Ingredients of Change," *Bulletin of the National Association Secondary-School Principals* (May, 1963), pp. 11-20.
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7. New Uses of Technology

A concentrated effort would be made to introduce the best and most effective uses of technology for improvement of learning including computer instruction, educational television and other new media that are coming onto the educational scene.

8. Longitudinal Research Studies and Evaluation Procedures

We propose to extend the research opportunities that have been made possible through the Comprehensive Project. We have set up an IBM data collection system and have laid the foundation for long-term studies to develop experiments and to make a continuing assessment of what happens to children in relation to the educational program. Many teachers and most of the administrators are closely involved in the planning and execution of research studies.

We propose to develop our evaluation efforts extensively as suggested in the next few pages and reach beyond the usual objective test type of measure. Several new ways of measuring are beginning to be available and we would continue to develop some of our own. Results of research and evaluation would be plowed back into the program.

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efficiency. The official reports are found in the Bulletin of the National Association Secondary School Principals.¹ Schools across the nation were chosen to be part of this experimental program. On the basis of these studies, it was proposed that schools of the future be organized quite differently from those of today. The final report, *Images of the Future*, presents the picture of how schools might be organized. The selection that follows includes the sections presenting organization patterns of instruction, curriculum, staff utilization, and student-teacher relations.

FROM IMAGES OF THE FUTURE*

ORGANIZATION OF INSTRUCTION

J. Lloyd Trump

The secondary school of the future will not have standard classes of 25 to 35 students meeting five days a week on inflexible schedules. Both the size of the groups and the length of the classes will vary from day to day. Methods of teaching, student groupings, and teacher and pupil activities will adjust to the purposes and content of instruction.

No longer will one teacher endeavor to be in charge of all of a class's activities in one subject. Instead teaching will be organized to be more efficient and effective.

Some aspects of learning will be presented by specially qualified teachers to relatively large groups of students. This, in turn, will provide more opportunities for students to explore ideas in small discussion groups. Although some classes will be much larger, paradoxically the student will assume more individual responsibility for learning.

The school will be organized around three kinds of activities:

LARGE-GROUP INSTRUCTION

INDIVIDUAL STUDY

SMALL-GROUP DISCUSSION

¹ Complete January bulletins devoted to this study for the following years: 1958, 1959, 1960, 1961, 1962.

* *FROM Images of the Future* by J. Lloyd Trump, pp. 7-22. Copyright by J. Lloyd Trump, 1959. Published by The Commission on the Experimental Study of the Utilization of the Staff in the Secondary Schools and the National Association Secondary School Principals. Reprinted by permission of J. Lloyd Trump and the National Association Secondary School Principals.

The Changing Organization of Secondary Schools

Although this chapter is entitled "The Changing Organization of Secondary Schools" the intent is to delimit the scope to those aspects that have a more direct application to instruction and learning at the secondary level. These aspects are the ones that the secondary school administrator can more adequately organize and control. The first section is concerned primarily with theory or practical theory. Section two is composed of examples of schools that have organized differently to bring about desired objectives. Section three discusses two different organizational elements that affect the composition of the school and the instructional time sequence.

Theoretical Aspects

Organization and Staff Utilization

Although there have been many attempts to change organization and to improve instruction, none has had the national effect of the NASSP-sponsored Commission on the Experimental Study of the Utilization of the Staff headed by J. Lloyd Trump. The purpose of this study was to see how schools and staff members could be organized differently for more effectiveness and

ences between students and instructors will be held whenever necessary to clarify goals, content, and personal problems. Students will read, listen to records and tapes, view, question, experiment, examine, consider evidence, analyze, investigate, think, write, create, memorize, record, make, visit, and self-appraise. These activities will take place in project and materials centers, museums, workshops, libraries, and laboratories, in and outside the school.

Study activities will require students progressively to take more responsibility for self-direction. The amount of time will vary according to subject and student maturity. On an average it will be about 40 per cent of their time.

Small-Group Discussion

Small groups of 12 to 15 students and a teacher will pit mind against mind to sharpen understanding. They will examine terms and concepts, solve problems, and reach areas of agreement and disagreement. At the same time they will learn about getting along together. This is primarily a student activity with the teacher sitting in as counselor, consultant, and evaluator. The discussion activities will occupy about 20 per cent of the students' time.

A New Concept

Experimentation will determine how education can best be divided among large-group instruction, individual study, and small-group discussion. (See Chart 1) * Decisions will be made concerning relative times to be spent, sequences, and the most appropriate learning activities and resources. The decisions will take into account the differences among individuals, groups, and subjects. This will bring forth a variety of study patterns. No longer will one teacher have the responsibility of teaching all of a subject to a group of 25 students meeting as a class five days a week.

There will be frequent regroupings of students in order to cope with the differences in abilities, interests, and needs. Flexibility of grouping will be a key characteristic. Individuals will not necessarily be placed in a single group for an entire year, nor for a semester.

The class of 25 to 35—so frequently found in today's schools, and often highly esteemed—will have no regular place in the secondary school of tomorrow. A class of 25 is unnecessarily small for large-group instruction activities. Not only is the size financially uneconomical, but also it means deadening repetition for teachers who must go over the same materials for several sections. Moreover, because classes are limited to 25 to 35 students, present teaching schedules usually require a teacher to conduct 25 (or more) classes a week. With a teacher's other activities, this leaves insuffi-

Large-Group Instruction

Large-group instruction will include a number of activities carried out in groups of 100 or more students. (Of course, limited enrollments in some courses may reduce that figure.) Instruction and discussions will be conducted by teachers who are particularly competent, who have more adequate time to prepare, and who will utilize the best possible instructional aids.

The following activities will be undertaken before these large groups:

- | | |
|-----------------------|--|
| <i>Introduction</i> | New topics, units, and concepts are introduced and placed in relation to other knowledge. Purposes are presented. Preparation for learning is developed. |
| <i>Motivation</i> | Reasons for study are understood. Interest is stimulated. Students are assisted in self-analysis of present knowledge. |
| <i>Explanation</i> | Understanding of terms and concepts is further developed. Questions by students and teachers are raised and answered. |
| <i>Exploration</i> | Identification of the range of possible learning activities is provided. Interests are amplified. Problems to be solved by students are considered. |
| <i>Planning</i> | Decisions are made regarding learning activities. Methods of study are planned. |
| <i>Group Study</i> | What has been learned is shared by use of buzz-sessions, panels, and other group techniques. Drill, memorization, problem solving, and organization devices are practiced. |
| <i>Enrichment</i> | Content not readily available to students is introduced. |
| <i>Generalization</i> | Understanding and appreciations are developed. Concepts that can be transferred to other situations are summarized. |
| <i>Evaluation</i> | Knowledge, appreciations, skills, and generalizations are measured prior to study, during study, and at the conclusion of the activity. A variety of evaluative techniques are utilized. |

These large-group activities will occupy about 40 per cent of the students' time. The amount of time spent in large groups will vary according to subjects, at different stages within a subject, and in accordance with student interest and maturity.

Individual Study

Students will engage in study activities as individuals, or in groups of two or three, with a minimum of constant supervision. Teachers and other staff personnel will serve more as consultants than task masters. Confer-

The school of the future will schedule students in class groups an average of only 18 hours a week, instead of the present 30 hours. Twelve of the 18 hours will be spent in large-group instruction (100 or more students) and six will be spent in small-group discussions (12 to 15 students). In addition to these 18 hours, the average student will be scheduled for about 12 hours a week in individual study. Most students will continue to spend about 30 hours a week on their regular subjects, as they do now, but it also will be possible for them to spend more. (See Chart II)

Students who do not have out-of-school jobs or heavy activity schedules often will spend as much as 20 or 24 hours weekly, instead of the average 12 hours, in individual study. The number of hours and locations of independent study will vary with the needs and the capacities of individual students. Using recommendations of teachers and counselors, individual schedules will be worked out by electronic devices. Although there will be flexibility in scheduling, the school will continue to know where its students are and what they are doing. Students will have adult supervision as needed.

The 12 hours a week spent in large-group instruction will be divided among the subject areas as seems desirable. Experience and judgment will determine how many hours yearly are desirable in such fields as mathematics, science, foreign language, history, English, physical education, music, practical arts, or general education. Similarly, experience will determine the optimum length of time, the frequency, and in what portion of the school day these large groups should be scheduled. The same policies will apply to scheduling the six hours a week of small discussion groups. Some of these periods will be 20 to 30 minutes, others will be longer.

An underlying purpose of the school will be to develop ability to study, think, and solve problems, in contrast to today's emphasis on memorizing facts. In large groups, small-group discussions, and individual study, the emphasis will be put on the goal of helping the student develop the ability to solve problems on his own.

THE INSTRUCTIONAL STAFF

The school of the future's instructional staff will include the following kinds of personnel:

PROFESSIONAL TEACHERS:	}	TEACHER SPECIALISTS
		GENERAL TEACHERS
INSTRUCTION ASSISTANTS		
CLERKS		
GENERAL AIDES		
COMMUNITY CONSULTANTS		
STAFF SPECIALISTS		

cient time for preparing instruction, developing imaginative teaching materials, counseling individual students, evaluating students, and keeping professionally up to date.

Today's class of 25 to 35 is too large for effective study. Freedom of movement, independent creative activity, and development of student responsibility for learning are difficult in a group of this size.

The class of 25 to 35 is also too large for successful discussion. Research in group process indicates that a group cannot be larger than 12 to 15 if there is to be effective participation of all its members.

CURRICULUM AND CLASS SCHEDULES

The general education required of all citizens in this democratic society will be determined carefully. In addition, students will follow specialized studies. The students will have demonstrated that their specialized goals are desirable for sound reasons and that they have the ability to achieve them. The rationalized organization of instruction already described, as well as an extended school day and year, will provide more time for specialized interests.

Much more emphasis will be placed on training students to check their own progress. Students will be able to make more immediate self-appraisals, using a variety of machines and self-marking tests, instead of waiting for teachers to grade their work. Obviously, there also will be independent evaluation by the faculty, but this will occupy a less important position than it does now. Teachers will have more time to plan and conduct evaluations that will be helpful to students in showing progress toward achieving all the purposes of instruction rather than merely the possession of facts, the principal area of evaluation at present.

The school will do less scheduling of students in 40- to 55-minute class periods. A student absorbed in work on a project will more frequently not have to stop when a bell rings at the end of a relatively short period. He will be able to continue his work instead of going on to something perhaps quite unrelated which often seems less interesting and less important. Possibly no bells will ring in the school of the future.

Today's school schedules students tightly so that they go from one class or study hall to another, six or more periods a day, with the same periods repeated five days a week. Students now spend about six hours a week on each of five subjects. These six hours per subject usually involve attending a daily 50- to 55-minute class session, plus approximately 20 minutes of work daily in study hall or at home. In the case of 40-minute class sessions, students are expected to do about 30 to 35 minutes of outside preparation. This means that students spend some 30 hours a week in school, not including time at extraclass activities, or in the homeroom.

ports, social studies essays, mathematics exercises, and other types of student papers. They will evaluate and criticize some of the student work in art, mechanical drawing, and other phases of creative and practical arts. When they are particularly competent, they will instruct.

The assistants will confer with individual students about their work and report to teachers about its quality. They will serve as laboratory, library, and materials center assistants and supervisors both during regular school hours and at other times when facilities are open to students. They will take over most of such laboratory activities as behind-the-wheel driving instruction. Supervision of some in- and out-of-school projects in agriculture, homemaking, and other vocational fields will be handled by this group. The assistants will supervise the practice of certain music groups, help in the supervision of field trips, and check the progress of students working on projects in the community or in local business and industry.

These instruction assistants are likely to be part-time workers, serving the school about 10 to 20 hours weekly. Although most of them will be housewives, there will also be men who do not have to spend more than 30 to 40 hours per week at other jobs. Most of them will be college graduates. All will have the necessary minimum training to perform their assignments.

College and high school students will provide another source of assistants. While care must be taken not to make too many demands on the time of these carefully selected students, many of them will profit from part-time teaching assistantships. They can provide valuable services. The experience will be most profitable to those who hope to become teachers and to those actually in teacher training institutions. However, these assistantships may stimulate the interest of others and contribute toward recruiting them into the profession.

The number of hours a week of instruction for assistants' services will be about 20 times the number of professional teachers in the school.

Clerks will do routine duties which are part of the instructional program. Ordinarily they will be high school graduates with reasonable competence in typewriting and ability to check materials and prepare reports. They will also grade objective tests, keep records, copy materials, operate duplicators, handle supplies, and perform similar duties.

The number of hours a week of clerical services for teachers will be about 10 times the number of professional teachers in the school.

General Aides will supervise students in such large areas as the school grounds, cafeteria, corridors, auditoriums, and large meeting rooms. They will assist at school performances. These aides will be adults with a minimum of a high school education and preferably with some work beyond high school. Their training need not include typing or other clerical skills. Unlike the instruction assistants, they will not need to have competence in specific subjects. However, many of the aides might serve as sponsors for

Teacher Specialists will include experienced teachers who demonstrate career interests and abilities. They will possess a master's degree as a minimum and many will have considerable training beyond that. They will be responsible for overseeing all the instruction in a given subject.

These specialists will teach subject matter for which they are particularly well qualified, usually to relatively large groups of students. At times they will serve as consultants to individuals and groups of students working in and outside the school and will assist with extraclass activities. Most of these teachers will be specialists in the use of such teaching aids as television, tape recordings, projectors, students' self-appraisal devices, and the like, although some may be particularly effective in working with smaller groups of students. They will continue to encourage pupils to share in planning instruction in order to sharpen incentive. They will be even more competent than now in one or more subjects. The teacher specialists will have general charge of evaluating student achievement.

General Teachers will be qualified, certificated persons with less experience. Or perhaps they do not plan to continue in the profession on a long-term basis. This group would also include those whose family responsibilities or other interests prevent their giving full-time, uninterrupted service. These teachers will participate primarily as observers and consultants in discussion groups.

The assignment of general teachers to such small groups does not imply any lack of importance in this type of activity, but it recognizes that small-group discussions require less daily preparation by the teacher. At times, these teachers will also assist in individual student counseling and with the evaluation of the student's progress. These teachers will work with the teacher specialists so that all phases of school work may be coordinated. Like the specialists, they will be especially competent in a subject area.

All professional teachers will not find themselves by interest or function as either teacher specialists or general teachers. An example might be a teacher whose other responsibilities do not permit his devoting as much time as a career teacher spends, but who has some special ability. Flexible schedules will permit these teachers to serve in functions accepted by both of the kinds of professional teachers described. Thus, teachers' individual differences in abilities, interests, physical energy, and available time will be recognized in ways that are impossible today when uniformity characterizes staff assignments.

There will be one professional teacher for each 40 students in the school.

Instruction Assistants, a group of technicians carefully selected on the basis of training and experience to do specific parts of the teaching job, will aid the professional staff. This group will work at activities higher on the professional scale than those assigned to clerks, but different from those assumed by professional teachers. The instruction assistants will carry out such services as reading and evaluating some English themes, science re-

For some parts of the day in the school of the future the relationship between students and teacher will be relatively impersonal. This will be true when teachers are instructing large groups of students with the aid of various projection devices. However, the time-saving made possible for both teachers and students by this large-group instruction will give both more time to see each other as individuals or members of small groups. The student will be able to develop a closer rapport with the teacher when he consults him as an individual than he would when he sees the teacher in a standard classroom situation.

Efforts will be made in the future secondary school to develop more independent study. Maturing students must face the fact that teachers will not always be there to make them study, tell them where to find the answers, explain every minute detail, and finally tell them whether or not they have learned something. Certainly fundamental characteristics of an educated person are the capacities to solve problems, continue to learn, and evaluate results on his own. Consequently students will do more independent work in libraries, resource centers, workshops, and laboratories, where assigned and selected projects will be supervised mainly by instructional assistants. The amount of time the students spend and the nature of the projects will vary with the maturity and needs of the individual.

The secondary school will make the teacher more a consultant and less a taskmaster. The teacher will spend less time and energy in telling students what they must do and more in raising issues and pointing the direction to possible materials and solutions. This does not mean that the teacher will abdicate leadership in education, or that the schools will be controlled by the students. Professional teachers will always spur students to higher goals, so long as these goals seem reasonable. But there will be determined efforts to achieve this by different means. Less emphasis will be placed on the role of taskmaster and more on the role of counselor and guide interested in the behavioral development of students.



Theory and Team Teaching

One aspect of the instructional organization or staff utilization involved team teaching. This innovation has probably received more attention than any other single staff utilization innovation. As the experimentation increases there is need for a bridge between existing and possible team models. John A. Brownell and Harris A. Taylor provide this bridge in the next selection through discussion of assumptions, definition of key terms, statement of advantages and disadvantages, rationale for a model, and conjecture about team operation in existing schools.

some extraclass activities when they have the interest and the abilities to do so. This group will be trained for the specific tasks assigned to them.

The number of hours a week their services will be available will be about five times the number of professional teachers in the school.

Community Consultants will be members of the community who will be used in specific assignments where they are better qualified than any available teacher. For example, a physician might answer questions on puberty, a world traveler on geography, or an atomic scientist on peace-time uses of nuclear energy. Such persons will usually volunteer their services. On occasion it may be desirable to employ an outstanding person for a number of appearances on a systematic basis. In this case the consultant would receive payment. Their contributions ordinarily will be taped, filmed, or recorded in some way for future use. These specialists in their fields will be employed from lists developed by the schools to supplement the services of the professional staff.

Staff Specialists, mainly professional workers, will provide services such as guidance, research, health, and aid to exceptional children, much as in today's schools. No doubt some of these specialized staff activities will be expanded and others added as the program develops.

As shown in Chart III, in a school with 400 students, or for each 400 students in a larger school, the instructional staff will be composed of:

- 10 Professional Teachers—full time
- Instruction Assistants—200 hours a week
- Clerical Assistants—100 hours a week
- General Aides—50 hours a week
- Community Consultants and Staff Specialists as needed

This would contrast with today's school which requires approximately 16 full-time professional teachers for each 400 students. Each of these teachers must teach five classes a day plus supervising study halls and fulfilling other assignments. Staff specialists may be available from a central office. But clerical help for the teachers is usually only available when a clerk in the principal's office has some free time and is willing to lend a hand. This is an irregular situation over which the teacher has no control.

STUDENT-TEACHER RELATIONS

The secondary school of the future will provide for closer relationships between students and teachers. In today's schools there are relatively few opportunities for students and teachers to meet as individuals or in small groups. The time of both is scheduled for almost all periods of each day.

Students must learn increasingly to accept responsibility for their own education.

Schools should strive to give all students an awareness of the moral and aesthetic aspects of life as well as the academic and the vocational.

Students with difficulties in learning need special assistance when the difficulties occur.

Education in a democratic society is a joint enterprise in which families have responsibilities and prerogatives.

To operate at peak performance, schools should augment their programs with the talents of citizens.

Schools should be flexible with respect to scheduling classes and grouping students.

Schools should be flexible enough that students may move ahead in their studies according to their abilities.

School divisions should be kept small enough that a spirit of camaraderie and sense of individual worth can develop.

The relationships between these assumptions and teaching team models will be made explicit in later sections of this report.

DEFINITIONS

Second, we need to define the word *team* in a school setting. In essence, a team is an instructional unit within a school. This unit is a combination of (1) a distinct student group, (2) a small faculty group responsible for teaching the student group, and (3) certain persons who assist the teachers and students. Since members of the faculty and auxiliary personnel can represent different levels of talent and service, we need further to define these elements:

A *Team Leader* is a mature, experienced, licensed teacher of unusual talent and extensive training who has been elected or appointed to serve as the leader of a teaching team and whose major responsibilities are teaching and coordinating the team's efforts. He is paid a stipend above his normal pay for this latter responsibility. Moreover, he receives time to plan and to coordinate team activities.

A *Team Teacher* is a fully licensed teacher who serves as a member of a teaching team.

An *Intern Teacher* is a beginning teacher, not yet fully licensed, who is given a regular teaching assignment on the team, and who receives supervision both from the employing school district and the sponsoring college or university.

THEORETICAL PERSPECTIVES FOR TEACHING TEAMS **John A. Brownell and Harris A. Taylor*

As teaching team experimentation increases, so grows the need for a bridge between existing and possible team models, between data and potential data. We seek to develop such a statement of theory with respect to teaching teams. Our discussion is ordered as follows: statement of assumptions, definition of key terms, statement of hypothetical advantages and difficulties of teams, a rationale for models, and conjecture about their operations within existing school situations. We begin, cautioned by Schopenhauer's statement: "What is right in theory must work in practice; and, if it does not, there is a mistake in the theory; something has been overlooked and not allowed for; and, consequently, what is wrong in practice is wrong in theory too."

ASSUMPTIONS

Some of the assumptions which seem to undergird current proposals for school practice and staff utilization are:

The best teachers should be given extra pay and recognition for instructional leadership.

The particular talents of teachers should be used.

Members of a faculty cannot function effectively in isolation.

Teachers should have personal knowledge of their students.

Teachers should be freed from routine clerical tasks.

Teachers have an increased responsibility for assisting in the training and educating of new members of the profession.

Teachers should keep up with the growth of knowledge, particularly in their own subject matter areas.

Effective programs for curriculum development require teacher responsibility for and involvement in innovations.

Sequences of subject matter content and intellectual processes should be conceived and developed for grades one through twelve.

Relationships among the fields of knowledge should be developed.

* FROM *Phi Delta Kappan*, January, 1962, pp. 150-57. Reprinted by permission of *Phi Delta Kappan*.

tunities amongst the team teachers in order to exploit teachers' special talents, knowledge, and training.

Improved guidance from the planned exchange of information about students and the intimate atmosphere within the team.

Improved correlation of subject matter because of cooperative planning in team meetings.

Through team leaders and team meetings identification and use of community resource persons.

The planning of field trips for team students in team meetings and less interference of field trips with other teachers' classes.

Because of their children's common experiences, increased interest and involvement of parents.

Because teams can be kept together for more than one school year, the organization to develop sequences of content and intellectual processes.

Improved climate of motivation because of accent upon individual identity and team spirit.

Because of team structure, the best use of teacher talent.

Because of varied groupings and presentations, greater student interest.

Under typical school conditions the common difficulties might be expressed as follows:

Finding teachers who can function harmoniously as a team.

Finding strong team leaders.

Scheduling team classes in secondary schools and organizing flexible groupings in the elementary schools.

Irritating effects of teams on existing departmental and grade level organizations.

Creating new and different administrative roles and problems.

Forcing independent and creative teachers into groups which inhibit their freedom.

Lowering the morale of non-team teachers.

Locating, training, and supervising teacher aides.

Many of the assumptions listed initially are clearly apparent in the elements and hypotheses, though some must be inferred. As we turn to the analysis of team models, we shall find additional evidence of these ideas.

REPRESENTATIVE TEAM

Fourth, we propose a series of team models. Because not all of the elements set forth in the definition section would necessarily be represented on any one team, several different combinations of elements are possible.

An *Auxiliary Teacher* is a licensed teacher who is called in upon team request.

A *Student Teacher* is a college student assigned by a teacher education program to a school to observe and to do directed teaching under the supervision of a master teacher within that school.

A *Master Teacher* is an experienced, regularly licensed teacher who possesses considerable advance study, unusual knowledge, and great skill in teaching.

A *Teacher Aide* is a non-certified person from the community who works with the team on a paid, part-time basis, relieving the teachers of clerical and other routine work so that they may concentrate on instructional activities.

A *Community Resource Person* is a talented individual, not ordinarily affiliated with the school, who can, under supervision of a teacher, assist in some specific aspect of the instructional program, or who can lead student study groups in his special area of competence.

HYPOTHESES

Third, we offer certain general and specific hypotheses regarding teaching teams. To a greater or lesser extent, all types of teaching teams possess common advantages and create similar difficulties. These common, hypothetical advantages, as compared with regular classroom organization, might be stated as follows:

Practical and effective in-service education through frequent team meetings.

Marked success in inducting new teachers into school systems as a result of interns as team teachers.

The use of aides to release teachers from routine duties.

Teacher involvement in planning and developing team curriculum because of team structure.

Through selection of team teachers and election of leaders, recognition for outstanding teachers.

Because of team structure, the ability of the team to form large and small groups for instruction, from one teacher to one student, to one teacher for 200 students.

Because of team structure, the ability to vary the length of instructional period to suit content and interest span.

Because of team structure, the ability to group and re-group frequently by achievement or ability levels.

At the elementary level, the ability to develop exchange teaching oppor-

grades	1	2	3	4	5	6
classes						
					team	

Hypothetically, a different continuum can be described for elementary schools not organized into self-contained classrooms. While these models are theoretically possible, most educators would seriously question their desirability and feasibility. The principle of this continuum is still grade levels, but the unit of organization is content rather than self-contained classes.

Model Ic

At one extreme, a team consists of one content area and pupils from one grade level. As many teams can be formed as there are major content areas in the curriculum.

grade	6					
classes	A	B	C	D	E	
language arts	team					
science	team					

Model IIc

In a middle position, a team comprises one content area and pupils from two or three grade levels. A team can be formed for each major subject area.

grades	1	2	3	4	5	6
language arts	team					
social studies	team					
mathematics	team					

Model IIIc

At the other extreme, a team comprises one content area and pupils from all grade levels. As many teams can be formed as there are similar content areas at all grade levels.

grades	1	2	3	4	5	6
science				team		
language arts	team					

More elaborate combinations would occur when the factors of subjects or grade levels were introduced. Indeed, so many combinations are possible that no complete explication can be made. We hypothesize, therefore, that certain representative combinations are most fruitful in the development of theory. If we establish continua of theoretically possible combinations for elementary schools and high schools, we can choose representative combinations at the extreme and the midpoint for each continuum to indicate the scope of possible combinations.

ELEMENTARY SCHOOL TEAM MODELS

Inasmuch as the elementary school is most frequently organized into grade levels, let us suggest a continuum with grade levels. We shall use a six-year, 600-pupil school for our model.

Model I

At one end of the continuum, a team consists of all classes of a particular grade level. Such a team can be formed for each grade. In a very large school, more than one team per grade could be organized.

grades	1	2	3	4	5	6
classes						
			team			

Model II

At the other extreme, a team comprises one class from all grade levels. As many teams can be formed as there are vertical arrangements of classes.

grades	1	2	3	4	5	6
classes						
	team					

Model III

In a middle position, a team contains classes from two grade levels. In a six-grade school, three teams can be formed; in a very large school, more than one team per pair of grades could be organized.

Simple variations of Models I and II merit attention. In any grade, two teachers with complementary talents can form a team; at adjacent grade levels, any two such teachers can form a team.

and training. Each team meets regularly to exchange ideas, to develop common policies and purposes, and to share information regarding pupils on their teams. By having each teacher assume responsibility for specialization in subject matter and in supporting activities such as remedial instruction, the faculty teams become self-sufficient units. By specializing, each team teacher can assist the other team members in planning curricula, in developing appropriate instructional techniques, and in meeting demands for increasingly specialized knowledge. When the faculty team deploys pupils into small and large groups for instructional periods, the specialists handle these groups as planned in team meetings. In schools organized into self-contained classrooms, exchange teaching (in which a team teacher takes the class of a colleague or perhaps several classes in a large group situation), brings to bear the specialization of one teacher upon all team pupils. Because team teachers meet regularly, they work not only on organization of material and high quality instruction, but also on problems confronting individual pupils, such as poor reading skills, low motivation, poor study habits, unwholesome behavior. Such interchange among team members will help to establish a professional faculty spirit and will deepen the regard for individual teacher talent. Inevitably, more responsibility for curriculum development will be in the hands of qualified classroom teachers.

NEW STAFF RESPONSIBILITY

Using the stated assumptions and hypotheses, we suggest that a team places its faculty members in new situations and requires of them new roles:

Team teachers belong to two organizations—the team and the school faculty. Divided loyalties must be resolved. The school with all of its pupils deserves primary allegiance.

A team demands increased expertness from its teachers. Since it organizes to exploit individual talent for instruction and curriculum study, this essential ingredient must be present. Only meager nourishment can come from scanty stores.

A team places the team leader in a leadership role with his colleagues and in a cabinet member role with the principal. Yet, this role is not administrative in the usual sense. Furthermore, much of the leadership of the team is shared. A leader without all of the vestments of authority must be, indeed, a real leader.

A team expands the visions of its faculty members. With such emphasis as the team places on sequences of subject matter, intellectual processes, and basic skills, shallow knowledge, narrow thinking, and skimpy powers of analysis among team members must yield to depth, breadth, and keenness.

The value of these last three theoretical models lies in the modifications which come to mind. Content areas might be broadly defined to include combinations of subject matter such as mathematics and science, language arts and social studies, fine and practical arts (physical education, home economics, industrial arts), or various "core" arrangements. In an eight-year elementary school, or in a junior high school, with such a definition of content, three seventh-grade core teachers, each with a complementary specialization, might combine to form a Model Ic team. Any one of the

ENGLISH	SOCIAL ST.	MATH
social studies	English	English
mathematics	mathematics	social studies

teams described above could in turn be modified by the inclusion or exclusion of certain categories of teachers and auxiliary personnel.

For example, consider the following modifications of a Model I elementary team:

TEAM TEACHER	auxiliary teacher
TEAM TEACHER	teacher aide
TEAM LEADER	community resource person

TEAM TEACHER	auxiliary teacher
INTERN TEACHER	teacher aide
TEAM LEADER	community resource person

MASTER TEACHER	auxiliary teacher
STUDENT TEACHER	teacher aide
INTERN TEACHER	
TEAM LEADER	community resource person

The existence of certain preconceptions about the elementary school seem to recommend the Model II team for experimentation. This team, comprising classes from two grade levels, appears to have the fewest weaknesses. It is realistic with respect to present teacher preparation, yet it propels teachers in new directions. It offers pupils a means of moving ahead as their abilities permit, yet it retains some homogeneity of age. It moves the elementary school into a new mode of organization, yet it keeps those features which provide for security during a time of change.

OPERATIONAL DESCRIPTION

If the advantageous hypotheses regarding teams were being confirmed, how would elementary school teams probably be functioning? We propose this description:

The faculty teams consist of several teachers, each with certain talents

dents one period each. These students have chosen a similar program of courses, such as college preparatory. More than one team can be formed at each grade level; teams can be formed for all grade levels.

grades	9	10	11	12
		English		
		history		
		math		
		science		
		language		

Model C₁C₂

At the other extreme, a team consists of two or more teachers and auxiliary personnel from one academic discipline and students from one or several grade levels.

grade 12	English	English	English
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grades	
9	English
10	English
11	English
12	English

A variation of Model C₁ merits attention. In schools with advanced placement courses a joint high school-college faculty team can be formed for each academic discipline in which such courses exist. A joint high school-college faculty team gives the high-school teacher the opportunity to teach freshman level courses for a portion of the day or for a term in the cooperating college. In turn, such a joint team involves college professors in teaching a class or two of the top quality students in the high school. The experiences thus gained can lead to the improvement of quality in instruction for advanced students, the acceleration of certain students into college courses in the discipline involved, the development of better standards for students entering college with advanced standing, and the establishment of professional contacts among teachers of a particular academic discipline over a span of years of schooling. Experiences of schools with the Advanced Placement Program augur well for the success of such a venture.

Models B₁B₂

In a middle position on the continuum of combinations for the secondary school, a grade level team consists of two teachers from each of three

A team pushes its teachers into an era of variety in instruction. Each teacher needs workable techniques for large and small group instruction, for tutorials, for organizing and supervising independent study, for using teaching machines and other types of specialized equipment.

A team forces teachers to learn how to use the time of a teacher aide. At first, many may not know how to use the aide for routine tasks nor how to use the time released. When an aide types, files, mimeographs, phones, takes attendance, answers correspondence, collects milk and lunch monies, checks out equipment, corrects tests, arranges field trips, proctors examinations, many teachers are nonplussed, because they usually do these things. With some experience and planning, however, team teachers find 20 per cent or more new instructional time.

With teams working in the school, the building principal encounters changed emphases in his responsibilities and new organizational structures with which to function.

Having one or more teams in an elementary school means that the principal works as a coordinator of the teams' efforts. Working through team leaders is a new role for most principals.

The principal must ensure an orderly, balanced, sequential program for the entire school. He must think, plan, and act as leader of an enterprise more diversified than formerly. Inevitably this role means greater attention to and more explicit knowledge of the entire school curriculum than is now customary. It means an active role for him in the development of courses of study and in the support of instruction.

Rather than only adding to the principal's load, teams can free him from many details. They can accept responsibility for playground and noon supervision schedules, for some disciplinary actions, for some parental counseling. The time freed can be devoted to spurring instruction to new levels of quality.

At this point in our analysis, an evaluation of secondary school team models is in order.

SECONDARY SCHOOL TEAM MODELS

Most secondary schools are organized into classes according to academic subjects. In keeping with this fact, we propose the following:

Model A

Our continuum of possible team combinations begins at one extreme with several teachers from several academic disciplines who have the same stu-

Since specialization is a characteristic of adult vocational and avocational life and of collegiate studies, the single discipline team may best fit the junior and senior.

Schematically, teams in a school district encompassing twelve grades could be represented in this manner:

grades	
1	MODEL II
2	
3	
4	
5	
6	
7	MODEL A
8	
9	MODEL B-1
10	C-1 B-2
11	
12	

OPERATIONAL DESCRIPTION

How would secondary school teams be functioning if they were confirming by their practices the advantageous hypotheses stated earlier? We suggest this description:

The faculty teams consist of teachers from an academic discipline who assume responsibility for a small or great portion of the academic education of their students. Each team meets regularly to organize instruction, to develop common policies and purposes, to share information concerning students, and to plan field trips and the use of community resource persons. The student teams comprise ninety to 200 students who have chosen a similar program of courses. The block scheduling of team students and teachers permits variations in the length and sequence of classes. When a flexible schedule, or a program to eradicate a study deficiency, or a carefully designed inter-relationship of materials is desired for team students, it is planned and carried out by the faculty team. Team students who are together for two to five periods a day, sharing a common program with the same teachers, develop a mutual understanding. Using this knowledge, the team teachers plan their courses, and work on a problem which confronts a team student, concentrating their combined efforts on a healthy solution. If they wish, they can bring a student in for group counseling, thereby offering evidence to the student that all of his teachers have an equal interest in him and that they are ready to help him. If necessary, all

different disciplines who have the same students one period each. More than one such team can be organized at each grade level; teams can be formed for all grade levels. A team comprising three teachers from each of two academic disciplines and a common group of students might be considered as representative of the center of the continuum.

English	English
math	math
history	history

English	English	English
history	history	history

Any one of the secondary teams described can in turn be modified by the inclusion or exclusion of certain categories of teachers and auxiliary personnel. For example, consider the following ninth grade Model A team.

ENGLISH	leader	leader	leader
HISTORY	team teacher	intern teacher	intern teacher
MATH	team teacher	team teacher	master and student teacher
LANGUAGE	team teacher	team teacher	team teacher
	aide/resource	aide/resource	aide/resource

We think that more than one team model or design will be useful in grades seven through twelve within one school or school district. In the intermediate school or junior high school grades seven and eight, the Model A team may be most suitable. This team consists of four to six teachers, each of whom represents a subject area and all of whom have the same conference period. It offers an increased level of teacher competence, yet retains a strong guidance emphasis and the close relationship between teacher and students generally considered helpful during early adolescence. In grade nine of the high school, the Model B₁ team may be most appropriate. This team comprises two teachers from each of three academic disciplines, and a common student group. It provides more depth in the subjects represented and offers opportunity to group students of a team by performance, yet supplies a home base of three periods of the school day with the attendant strength in guidance and counseling. By grade ten, students' goals grow clearer and their preparation patterns more diversified; they need greater independence and increased responsibility for their choices; they can probe more deeply into the abstractions and processes of their various academic studies. For these reasons, team Models C₁ and B₂ may be most suitable. The latter team consists of three teachers from each of two academic disciplines, and a common student group. The Model C₁ team is composed of representatives of a single academic discipline.

curriculum reform since the new instructional unit broadens the number of curriculum building groups within his school.

NEW DIRECTIONS FOR TEAM EXPERIMENTATION

Experiments with teaching teams need to be expanded. We need to test systematically many more models at the elementary and secondary level. We need to know under what conditions of size, purpose, and faculty-administration-community support an entire high school can be organized into teams. We need to determine carefully the effect of team organization upon the attitudes of upper-secondary-level students toward their studies. We need more information on the extent of use of grouping and regrouping, on the difficulties in forming certain sized groups for specific purposes, and about the effects of grouping and regrouping upon learning at all levels. We need to examine critically such developments as independent study, tutorials, and the use of teaching machines, to see whether (1) they actually produce better learning, (2) classroom teachers can organize such experiences adequately, and (3) requisite techniques can be developed among teachers in the field.

Most of all, perhaps, we need to confront the bewildering, Janus-faced problem of keeping abreast of the growth of knowledge and infusing new knowledge into the school curriculum. Can we say with certainty that teaching teams are the best help to such critical reform? Do certain team models have greater strength than others in this respect?

We recommend closer analysis of assumptions, more explicit models, better research design, and more penetrating evaluation of results of team experimentation so that schoolmen will be able to make sound judgments about teaching teams.

Practical Application: Examples of Changing Schools

In moving from theory to practice, examples of schools that have already been successful in innovation have been chosen. These schools are representative of some of the best in the nation. Although the primary concern, as presented in this section, is in organizational patterns, the presentation of a complete school program has been made to show how innovation affects all components of the school.

Nongraded Program

The nongraded high school has been advocated for years, but B. Frank Brown took the theory and built a practical school program. By eliminating

the team teachers can meet with a parent to talk about his youngster's performance. Under the team leader's direction, the team constitutes a clearly identifiable instructional unit and student group within the total school.

NEW STAFF RELATIONSHIPS

As with elementary school teams, we suggest that secondary teams place their faculty members in new situations and require of them new roles:

Secondary team teachers belong to three organizations—the team, the department, and the school faculty. None is an island. Communication among the three must be maintained; the responsibilities of each must be fulfilled.

The team leader, although not an administrator in the usual school sense, is responsible for the performance of the team. As a senior colleague, he sometimes shares his leadership with colleagues. He cooperates with his department head in departmental programs and policies and with the principal of the school. Yet he gives intellectual resources, direction, and vigor to the team's programs and policies.

The close association of representatives of several academic disciplines forces these representatives to think anew about the meaning and significance, the interrelationships, the different modes of thinking and defining evidence of their disciplines.

Since teams organize to exploit different teaching techniques, team teachers develop expertness (or the team fails) with large group lectures, with tutorials, with seminars, with independent study, with televised lessons, with teaching machines, with skill-building programs.

With an aide to do the typing, filing, mimeographing, telephoning, procuring, supervising of committees, and marking written work, team teachers need to focus their efforts on instruction which is not routine. With work, team teachers can devote a significantly greater proportion of their time to developing students' conceptual powers, abilities in disciplined prose and speech, and attacks on problems.

The secondary principal encounters changed emphases and new organizational arrangements when teams begin to operate:

The team introduces another instructional unit beyond grade levels and departments, a unit the activities of which must be coordinated with existing organizational structures. But the unit must also have a degree of autonomy or its purpose is lost. Decentralized, federalist approaches may create tension and dissension, but they free the greatest number of teachers for their most productive, creative efforts.

The principal will be less closely associated with the growing edge of

address before the tenth College Board Colloquium, Dyer reported that the practice of measuring students intellectually by the grade they have reached is not even remotely reliable. He asserted that the grade average is only an event at best and no measure of achievement at all.

The academic design should be reduced from the current seventeen fragmented divisions of learning (K-12 plus four) to five general areas with learning continuous within each. Trends today suggest that the school of the future will be composed of the non-graded primary curriculum, the non-graded intermediate curriculum, the non-graded junior high curriculum, the non-graded senior high curriculum, and the non-graded college curriculum.

Space limitations prohibit treatment of the entire non-graded spectrum. Consequently, this article will deal only with the non-graded innovation of the secondary school, with the exception of a brief word about the implications for colleges.

We realize that bringing about change in the college curriculum is somewhat like moving a graveyard, but the impact of students educated without the academic bridle is already bringing a new respect for change in higher education. Spurred by the increased intellectual excitement of their students from non-graded high schools, colleges too will turn to the non-graded system. One result will be that college students in far greater numbers will enter graduate school.

TO RECOVER FROM DISASTER

The first step in recovering from decades of intellectual disaster wrought by the grade must be to reclassify youngsters for learning on the basis of their achievement rather than the grade to which they have been chronologically promoted. They must be fanned out in a new design. This is accomplished by clustering students intellectually on the basis of their performance on nationally standardized achievement tests. The intelligence quotient, which has been a primary measure in the past, is of little or no value in the non-graded school.

The results of standardized achievement tests dramatically reveal the fallacy of continuing to group students into grades. In the average grade in high school, only half the youngsters have the required knowledge to be in that particular grade. For example, the dispersal of achievement among students in a tenth-grade class in English will range from grade three through grade thirteen, which is the first year of college. The scatter is equally great in most other subjects. It is even greater in mathematics.

Youngsters at Melbourne High School have been reclassified in line with their level of achievement and assigned to fluid learning situations in each subject on the basis of their needs. Through selective acceleration, some

grade structure and introducing a seven-phase curricular program, remarkable changes have been made in student attitude, achievement, and progress.

THE NON-GRADED HIGH SCHOOL *

B. Frank Brown

What the space age needs educationally is a crack public school system designed to educate more youngsters than ever before and do the job faster and better. The components for the kind of school needed are inventiveness, flexibility, and quality.

These qualities are prominent in the non-graded high school, an innovation now beyond the hothouse stage. But the non-graded high school is an iconoclasm, and the conventional school administrator fears it. When he considers it at all, he thinks of it as involving an esoteric organization suitable only to unique situations. In reality there is nothing mysterious nor singular about it. It is a clear, crisp, logical arrangement by which schools can take off the academic bridle which restrains youngsters intellectually.

If the public schools in America are ever to achieve the ideal of having each youngster progress at his best rate of learning, then some form of non-grading must be instituted. This leads to the shattering implication that within the next five years every intellectually respectable high school will have some degree of non-gradedness. For the grade is a trapping of the outworn past. It was first conceived during the Middle Ages in a *Gymnasium* at Stuttgart, Germany, and has grown sterile in the age of universal education and the hydrogen bomb.

The durable attractiveness of the grade lies in its administrative convenience. It serves as a comfortable holding pool in which school administrators can and do throw youngsters for custodial purposes and forget them for a year. By comparison, non-grading is an administrative prickly pear constantly needling for attention to the learning needs of youngsters.

The schools have been both the inheritors and the prisoners of the grade tradition. In an era of invention and change, educators must overcome inhibitions against breaking the grade lockstep. With it will go some of the obsolescence which has been built into the curriculum with the grade.

The logical basis for non-graded education was clearly stated recently by Henry Dyer, vice president of the Educational Testing Service. In an

* FROM *Phi Delta Kappan*, February, 1963, pp. 206-209. Reprinted by permission of *Phi Delta Kappan*.

dren of comparable academic accomplishment and pace are grouped together.

There are no study halls in the Melbourne plan for a non-graded school. The study hall, like the grade, belongs to the remote past. In a non-graded curriculum students are expected to take responsibility for their own learning and the monitored type of study hall becomes a useless appendage.

All students at Melbourne High are registered for six subjects. Subjects do, however, vary greatly in depth. For example, in a phase one mathematics class the concepts studied are fundamentals which the student should have been required to learn in the elementary school. At the other end of the scale is phase five, which encompasses calculus during the third high-school year. This kind of flexible and mobile curriculum is rewarding to both the untalented and the multitalented. Equalitarianism wrongly conceived ignores differences in both achievement and native talent.

The following are typical schedules of three students of the same age but of widely varying abilities.

<i>Student A</i>		<i>Student B</i>	
	Phase		Phase
English	1	English	3
Mathematics	3	Mathematics	2
World History	2	Amer. History	4
Biology	3	Chemistry	3
Phys. Ed.	X	Band	X
Typing	X	Art	4
<i>Student C</i>			
		Phase	
English		4	
Differential Equations		5	
History of Asia		3	
Physics		5	
Spanish		4	
Probability & Statistics		Q	

CHANGES WROUGHT BY THE GRADELESS PLAN

What are some of the changes that have taken place at Melbourne High School after three years of gradeless learning?

First, it is evident that a non-graded school is different from a graded school in more ways than just a re-ranking of students. Some classes must be smaller; others must be larger.

A subject in which class size has been dramatically increased is typing. Typing classes have been expanded to 125 students per class. The surpris-

students begin college level work when they arrive as tenth-graders. By the same token, some students in the twelfth grade receive greater amounts of remedial work in areas in which their achievement is below standard.

The plan for continuous learning at Melbourne accommodates youngsters by placing them in temporary learning situations from which they can move at any time. These *ad hoc* learning arrangements are called phases. A phase is a stage of development with a varying time element. One student may remain in a low phase indefinitely; another may progress rapidly into higher phases.

When students enter Melbourne High School they are sorted on the basis of nationally standardized achievement tests. They are then clustered into a new spectrum in line with their various aptitudes and abilities.

Phase 1—Subjects are centered around remedial work.

Phase 2—Subjects are concerned with basic skills.

Phase 3—Subjects are designed for students seeking an average education.

Phase 4—Subjects are available for students desiring education in considerable depth.

Phase 5—Subjects are open to students who are willing to assume responsibility for their own learning and plan to go far beyond the boundaries of a single course.

Phase Q—Students whose creative talents are well developed in special areas should give consideration to this "Quest" phase of the curriculum. This is an important dimension of the phased organization designed to give thrust in the direction of individual fulfillment. In this phase a student may research an area in which he is deeply and broadly curious, either to develop creative powers or in quest of knowledge. A student may spend from one to three hours a day in Quest.

Phase X—Non-academic subjects which do not accommodate student mobility; e.g., typing, physical education. These subjects are ungraded but unphased.

This realignment of students brings about a major difference in course content between the non-graded and conventionally graded school. The motion of the non-graded curriculum compels the school to resort to a much wider range of materials. No standard textbooks are used in any phase. A multiplicity of material has replaced them. A gradeless curriculum designed for student mobility must be saturated with variegated materials.

The effect of non-grading is to change the educational process so that students are accelerated through subject matter on a continuing rather than yearly basis. Learning is both more appropriate and more viable when chil-

five English, which is an open-ended advanced placement college program in which the student can study and learn for three years. The intent here is to do something for students who can "run a faster mile."

In order to avoid repetition in literature and accommodate up-phasing of students, all phases of English study the same literature in a given year. One year all phases study American literature, the next year English literature, and the third year world literature.

Another reform which is spurred by non-graded education is a change in the function of the teacher. Students who are unbridled intellectually are no longer content with a passive "telling" kind of education. Teachers must throw out the old kit bag.

Gradeless schools are moving from memorized learning and simplified explanations to the process of inquiry for each individual. What is inquiry? In its simplest form, inquiry is curiosity linked to action. It means newer and deeper perceptions for the individual. In its ultimate form, it leads to the developments of traits of imagination and creativity and eventually to new discoveries for science and the humanities.

In the non-graded school, the intellectual pace of various students is more separate and unequal than in graded education. As the curriculum is expanded and becomes variegated, achievement becomes a hallmark of the school. The illusory aim of evenness in achievement which is characteristic of graded schools is not evident here.

Rebellion against the grade lockstep is one of the missed revolutions of our time. Still poised and full of ferment, it may never occur, although the grade curtain which was rung down around learning has been pierced by a new system of learning where the flashpoints are phases instead of annual promotion.

As Philip Coombs said when he was executive secretary of the Fund for the Advancement of Education, "What the schools need is not simply more money from the outside but sweeping changes on the inside." Sweeping changes do take place in a non-graded school, and without an increase in the budget.

An Educational Park

Nova High School in Fort Lauderdale, Florida, is a new high school planned and built for innovation. As one of the first tax-sponsored schools encompassing kindergarten through junior college, plus a private university and a graduate school, it will, when all phases are completed, offer a continuous integrated process of learning. Many plans involving educational parks are being patterned after the Nova concept.

ing thing is that we never thought of this before. The typewriter is a gadget and students attempting to master a mechanical device can be taught in classes of almost unlimited capacity. Space and administration are the only considerations. The teacher needs merely to be equipped with a first-rate public address system and a transistorized neck microphone without wires, so she can move freely about the room. One typing teacher at Melbourne easily instructs 625 typing students a day in five classes of 125 students each.

Since we have found that students can be taught typing in classes of 125 as well as in classes of thirty, three teachers are released for assignment elsewhere in the school program.

Typing and similar subjects at Melbourne High School which are ungraded but do not permit student mobility are scheduled as phase X. The student remains for a semester or even a year in phase X classes.

The non-graded high school as developed at Melbourne stands squarely on the concept of basic education first. This requires that youngsters coming into the high school who are weak in the basic subjects of English and mathematics devote double time—two periods a day—to each of these subjects until such time as they are up to the standard we set. The non-graded innovation, while embracing flexibility, is centered on a tightening and toughening of the academic sinews.

The gradeless curriculum at Melbourne High is also founded on an awareness that each of the school's students is different. The program of studies is designed to accommodate these variances in individuals.

The curriculum, which has a degree of flamboyance and at first seems complex, is merely unrestrained. It is designed to offer a bountiful academic fare on a wider range than is conventionally permitted when students are chronologically grouped in grades ten, eleven, and twelve.

Since English is the most widely studied subject in any school, perhaps the strategy of the Melbourn curriculum is best understood through this subject and what happens to a student who enters Melbourne High in the tenth grade.

Many tenth-grade students are hampered by an inability to read at what is called the tenth-grade level. These handicapped students rarely finish school. Truancy to them is a matter of self-preservation. In an effort to meet this problem, the teacher time gained from consolidating typing classes is used to reduce loads in classes for students in need of remedial work (phase one). These classes contain a maximum of fifteen students. They are designed so that each student may be involved in a personal engagement with learning.

Remedial students are taught to read through phonics. Students who have not learned basic skills are vigorously confronted with basic education and each phase increases in depth. At the other end of the spectrum is phase

ology, and home nursing. A student who chooses a foreign language in one school year may elect two courses from technical science; a student who does not may elect five for that school year.

Despite the seeming rigidity of this curriculum, there is flexibility within its framework. Nova is a nongraded school and this is the main feature of its program. It is possible for seventh-year students to be studying math with tenth-year students, science with eighth-year students, and English with seventh-year students. In other words, a nongraded program allows complete homogeneous grouping within each subject area without any regard to age or year in school. *This educational program is truly tailored to individual needs and brings into practice the theory of "taking each student as far as he can go."* For example, the mathematics department strongly believes in vertical acceleration for the gifted. The nongraded organization allows this to be done with ease. It is expected, therefore, that many students will study college mathematics courses such as abstract and linear algebra, calculus, and probability and statistics, beginning these in some cases as early as the ninth and tenth year in school. It is anticipated that, in the future, mathematically capable students will be able, prior to their graduation from high school, to complete what is now considered a very strong undergraduate math major in leading universities. At the same time, many of the less capable students will not get through the normal high school curriculum, even though all students will study mathematics as long as they are in school.

Each discipline has identified the approach its faculty thinks best suited to remove extraneous retardation in the case of the gifted and relaxation of time pressures for the less able. The idea here is predicated on the fact that each student should go as far as his capabilities will carry him without pressures to complete material for the sake of artificially set standards which do not take into consideration the individual differences among students.

Instead of being promoted a grade level each year, students progress through a series of achievement levels called "units" in each subject area. At the end of each unit a test is given which determines whether the student may continue to the next level. A student performing below minimum levels on the test must repeat that unit satisfactorily before being allowed to advance. Thus no student ever fails a whole year's work in any subject. At graduation time it is not expected that all students will have completed the same amount of the curriculum. However, a student who reports for a certain unit is expected to have a set of values, skills, and knowledge in common with others who are promoted to the same units. The identification of material within a unit allows for ladder-like steps upon which the student is constantly building and will use in later units.

When students enter Nova they undergo area examinations and all information coming from their former schools is considered. The student is

NOVA HIGH—SPACE AGE SCHOOL **Burt Kaufman and Paul Bethune*

The Nova High School, which opened in September, 1963, is an initial unit of the South Florida Education Center, an educational complex imaginative in design and advanced in concept. Eventually this complex will house tax-supported schools encompassing kindergarten through junior college, plus a private university with a graduate school. This long-range program, when completed, will present a continuous integrated process of learning unparalleled in education history. Known as "The Nova Plan," this new approach may well develop a model educational system for the country, state, and nation.

In March, 1960, Dean Dessenberger, then chairman of the Broward County Board of Public Instruction, looked at Forman Field, a 545-acre government surplus airfield, and envisioned this exciting experiment in education. Tireless efforts by the school board and Broward's professional educators resulted in a government gift of 320.5 acres and the purchase of the remaining land. After months of research and intensive planning, construction of Nova began in August, 1962.

What makes Nova High School different? It is not experimental in curriculum but in concept. Its construction features, equipment, teaching aids, and instructional methods have been tested and proved in other school systems. In fact, the director of Nova High School, Arthur B. Wolfe, spent three full years visiting outstanding schools of the United States in order to incorporate the best of modern educational methods in the Nova plan for instruction. The educational specifications were completed in their entirety before the first brick was laid.

Nova is a space age school. Its philosophy is based on a concept best described as scientific learning for a scientific age. Interestingly, to achieve the goals of such a philosophy, there has been a return to a "hardcore" curriculum. Each Nova student pursues a schedule of studies which includes mathematics, foreign language, English, science, social studies, technical science, special studies, and physical education. A student may choose a foreign language from among Latin, Spanish, French, Russian, and German. His choice of a technical science or special studies course comes from electronics, mechanical and scale drawing, music, home economics, art, personal typing, mechanical technology, safety and driver education, physi-

* FROM *Phi Delta Kappan*, September, 1964, pp. 246-50. Reprinted by permission of *Phi Delta Kappan*.

tions were financed by the omission of facilities which have long been considered as standard equipment in conventional schools. Nova has no large auditorium and no expensive kitchen or cafeteria. Students either bring their lunches or buy food at snack bars which are supervised by a dietician. The students eat outside in a protected area.

Nova has already become an educational showcase in its own locale, Broward County, and is rapidly becoming a national mecca for educators hoping to see the newest ideas in practice. It is anticipated that many of the ideas and practices alive at Nova will be adopted elsewhere.

The House Plan and Experiments in Flexibility

The Newton, Massachusetts, schools have been involved in innovation for many years. Charles E. Brown, superintendent, states that the manner in which a school is organized has a great deal to do with how youngsters learn. At the secondary level the large schools of Newton have been divided into houses, each with about 125 pupils. Approximately five faculty members are assigned to each house to work closely with students.

THE SCHOOLS IN NEWTON: EXPERIMENT IN FLEXIBILITY *

Charles E. Brown

The city of Newton, Massachusetts, is an amalgamation of fourteen residential villages, held together by a first-rate government, a considerable amount of civic pride, and an active public school system. A city of over 93,000 people, with a growth that has been steady rather than spectacular, it is a mature city in every sense of the word. Above average in wealth, it nevertheless has a diversified population when measured in ethnic, religious, social, or economic terms. There is, however, uniformity in one respect—the support for and interest in its public schools.

Though it is only the ninth largest city in Massachusetts, Newton has the fourth largest public school enrollment, consisting of over 18,000 pupils housed in 25 elementary schools, 5 junior high schools, 2 high schools, a technical high school, and a fully accredited public junior college. While a good many of the pupils aspire to further education beyond high school

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then placed in the appropriate units in each discipline. The class to which he is assigned may have students at various levels within the unit. For example, some students in the group may be working to considerably more depth than others in the same group. This is not intended to retard the more able students but rather to meet individual needs and interests. Some students need depth in chemistry; some do not. Even though the student does not elect major studies, he does in practice exercise control over a portion of his education.

A student whose interest is in science may elect to go far beyond what is required, while in English he may pursue a less time-consuming pattern. On the other hand, he may devote extra effort to languages and do a minimum of science and math.

As the student progresses through the sequence, he is aware of his status within the sequence. The units require approximately one month of time for the average student, about six weeks for the less able. During a major reporting period of seven and a half weeks a typical student would have completed at least one and often two units. Each student receives a quality grade and a quantity grade. These are recorded on the report card and averaged for a final grade for a period.

Students are encouraged to do independent study and research in every discipline. The student is taught from the very beginning that he is the person primarily responsible for his education. Far more freedom is allowed students at Nova than at traditional schools, the goal being to help students develop mature study habits before they enter college. It is expected that Nova students will find the transition from Nova to college a smooth one.

The end of one trimester and the start of another means very little to the individual student or teacher. It calls for no major rearrangements. The one exception to this is the end of the third trimester, when the students embark on a one-month vacation. At this time we try to finish a unit so that the students will be mentally free for their vacation.

Nova is not attempting to become an educational racetrack. Students may apply for early graduation, but each case will be judged on its own merit. Ultimately, Nova will hold three graduations a year, to coincide with the student's entrance into the junior college or to one of the universities.

The newest and best of educational techniques and media are utilized at Nova. Among these are team teaching; closed-circuit television; overhead projectors in every room; reading laboratory; science and language laboratories; and large group, medium group, and small group instruction. There is wall-to-wall carpeting throughout the school, resource centers equipped with a large number of reference books, micro-film readers, teaching machines, and tape recorders. At hand is a complete data-processing center. The closed television system permits telecasting throughout the school as well as the making of video tapes of lessons and lectures for re-showing at a later date. Nova is completely air-conditioned. These innova-

ingful when the opportunity is available to set it in historical perspective; a painting takes on new meaning when properly related to the language and setting of its time; a language becomes something more than conjugations and vocabulary lists when it can be shown in its full literary, cultural, and historical perspective. Any good teacher, of course, attempts to do all of this under any form of school organization; we are seeking to make it easier for him to do so.

In addition, we believe that in the creation of the small community of teachers, scholars, students, we can counteract the mistaken notions that the major purpose in attending high school is the attainment of acceptable grades rather than learning, that the various subject-matter fields exist apart from each other with little or no common intellectual ground, that the primary relationship of teacher to student is that of judge rather than guide, and that the best and perhaps safest place for the student to be, intellectually, is in the crowd, rather than seeking his own new horizons.

As suggested by the preceding paragraph, each individual school has a great deal of autonomy in making decisions, and yet there is great strength and direction flowing from the city-wide divisions of Instruction, Pupil Personnel, Business Services, and Personnel. This seemingly contradictory situation can exist without strain because of a feeling of trust and respect among the people concerned and a lack of concern about the protocol of "proper channels." I must confess that this is not the easiest way to run a school system, but it is, in my opinion, the most productive. Freedom—with responsibility—is valued by almost anyone who is worth having on a staff.

There is a tradition of outstanding school committees in this city, committees of unusual insight and depth of commitment to public education. Among many important contributions made by these committees, one of the most important has been their practice of outlining broad policy and then allowing their superintendent and his staff to run the schools within this policy. While it might be said that such a relationship between a board and its executive officer is obvious and should be expected, it is sufficiently rare in American education to merit attention.

FLEXIBILITY IN MATH

We have never had a rigidly prescribed curriculum in our schools. Through the development of curriculum guides, we have established a sense of direction on a city-wide basis, but these guides have always left considerable room for adaptation and change by the individual teacher or school working in a particular situation with a particular group of children. For example, we introduced the so-called modern mathematics courses in the upper grades when they were developed about 1957, even though the new courses for the lower grades were not yet ready for classroom use.

(about 75 percent actually go on), their needs, interests, and abilities are many and varied, and our schools are organized on the philosophy of a comprehensive program of education which attempts to meet these variations.

The manner in which a school is organized has a great deal to do with how youngsters learn. Not all children, for example, learn at the same rate; indeed, even in a single child there are differences in the rate of learning at different times. We are seeking an organizational pattern which permits pupils to move continuously at their optimum rates rather than in fixed yearly increments, which may be too large for some, too small for others.

In one elementary school, for example, we have discontinued the use of age-grade groupings and think of the youngsters as members of a primary or intermediate unit. A child may be with one set of classmates for reading, a different set for mathematics, and so on. Some classmates may be a year or more older than he, others may be that much younger. These groups are subject to change as the pupils' needs change, and pupils may move from group to group whenever it becomes necessary.

A similar pattern is being used in one of our junior high schools, where the problems of grouping and scheduling are even more complex. Grade designations have been eliminated, and pupils are grouped according to the work they are capable of doing rather than by age. This is a relatively large school, and in order to provide closer communication among teacher and pupils, the school has been divided into houses, each with about 125 pupils. The five or so faculty members assigned to each house are able to work closely with one another and with the students, and can gear the program to the individual to a more significant degree than was possible in the conventional class-and-grade-oriented pattern. In addition, the house plan has given the individual student considerably more responsibility for his own learning through a system of "contracts" between the teacher and the student that allows the student a voice in shaping his intellectual life. The result of all of this is a school where a student's life is controlled not by the periodic ringing of bells (indeed, there are no bells) but, rather, by his degree of commitment and ability.

In the high school we are also turning to a school-within-a-school solution. Still on an experimental basis, this plan brings together about one hundred students and five teachers to form an "intellectual community" representative of the total student body but committed to a different kind of intellectual relationship from that which has been possible in the past. Students go to lectures involving the entire group, attend regular classes and small seminar groups, and carry on independent study.

The five faculty members, each representing a different discipline and each serving as a teacher-tutor-adviser to a group of twenty students, work together to develop relationships and understandings between and among their disciplines. Thus, a piece of literature becomes more alive and mean-

Advanced Placement mathematics has been taught in Newton since 1953. Prepared for students with unusual power in the subject, the course takes them, in grades ten, eleven, and twelve, through at least the first year of college mathematics, including the study of calculus. If students can qualify on a special examination given in May of each year, they need not take first-year math in college.

Beginning in 1962, a special course in computers has been offered in our senior high schools. Because of the increasing use of computers in all fields, the instruction is both practical and theoretical in nature, and students have an opportunity to work with machines in our own data-processing center.

Essentially the same pattern is followed in our junior high schools, where every student is required to study mathematics and is allowed to change his course of study according to his degree of success.

We have been unhappy for some time with the traditional high school social studies sequence of World History, American History, and Problems of Democracy. Even in the hands of good teachers, these courses seemed to us to be lacking in the intellectual stuff that produces thoughtful men. Further, we felt that they did little to get the student to care about society and the role he plays in it. Feeling, as well as reasoning, should be involved in the study of mankind.

Consequently, we set out, under the direction of Wayne Altree, head of the social studies department, to develop a three-year sequence centered around Western man and his development. In these courses we wanted to do many things, two of which are central. First, we hoped to give the students a sense of identity—a sense of who he is, where he comes from, and where he is heading. *To understand history, it seems to us, the student must first understand contemporary man and his culture.*

Second, we sought to lead the student closer to an understanding of reality. There has been something superficial about the teaching of history in the past, with its emphasis on a descriptive narrative of events presented chronologically. To use the words of Dr. Reginald Arragon, retired professor of history at Reed College, who spent the better part of last year in Newton as a scholar-in-residence,

Learning about history is learning to interpret human behavior, individual and collective, in past and present, through the examination of particular events and situations according to the available evidence and a frame of reference or pattern of meaning that broadens and deepens the student's experience. Teaching history is not essentially the teaching of "bare facts" and of chronological sequences, not even, indeed, of specific interpretations, though the latter will be necessary as models, but rather the fostering of the capacity to interpret and to understand with sensitive and critical judgment.

We needed the sustained assistance of scholars, not only to serve as a source of ideas but to react to ideas presented by our faculty. We have found this assistance in several places, the most important being in the

The basic philosophy underlying Newton's program of studies is a recognition that students are not all alike. Therefore, in order to have a mathematics course appropriate for each student in our senior high schools, the sequence of courses varies in content and in degree of difficulty. Under the label of Curriculum I, we offer the University of Illinois Committee on School Mathematics program in both an honors and a regular section. Entrance into the honors section of U-I Math is restricted to students who are recommended by their junior high school teachers, are high in intelligence, are highly motivated in mathematics, and have the ability and inclination to study independently. Over a three-year period, these students use the UICSM materials in such areas as geometry, mathematical induction, sequences, exponents and logarithms, circular functions, polynomial functions and complex numbers, as well as additional topics in preparation for calculus. In the regular U-I Math division, the pace is a little slower, and the level of achievement and independent study is somewhat less exacting.

In Curriculum I is another sequence of courses, likewise with an honors and a regular track, in which School Mathematics Study Group materials are used. As in U-I Math, enrollment in the honors section is limited to pupils recommended by their junior high school teachers. The course content for both the honors section and the regular section includes the SMSG plane and solid geometry, introduction to coordinate geometry, topics from intermediate and college algebra, trigonometry; and for the honors groups, the study of calculus and analytical geometry.

In both of these top college preparatory courses, a modern approach is made to the teaching of mathematics, and work in the honors section leads either to study of Advanced Placement calculus or to a fifth year of study that includes probability and statistics, matrix algebra, and other pre-calculus topics.

Still another course in mathematics, called Curriculum II, provides a good, solid preparation for college mathematics, though not all topics are dealt with in the same depth as in Curriculum I. Curriculum II is intended for students who need more time in which to learn the concepts. We feel that all students capable of taking a college preparatory course should do so, whether or not they plan to go to college. Also, we encourage all students to enter the strongest course or track in which they can succeed with a grade of C or higher.

If a student has not developed his mathematical background to the point where he can take the college preparatory course, he enrolls in basic mathematics. That two-year program includes arithmetic, algebra, geometry, and consumer applications. Thus, in senior high schools the mathematics curriculum is sufficiently varied to provide appropriate instruction for every student, according to his needs and ability.

In addition to the basic courses just described, special programs and projects are also available to students. Two examples give some indication of the range of these activities.

five aspects to this program: a survey of recent studies that describe the learning patterns and attitudes of terminal students and their school and family backgrounds; a program of assemblies to complement the course of study and to foster student participation in school activities; a tenth-grade course in language as a tool which leads the student to look at language in the light of current linguistic studies; an eleventh-grade course which gives large-group instruction on reading techniques, word study, weekly classroom reading exercises, and regular clinic sessions; and a twelfth-grade program in the humanities designed to develop awareness of the arts and link the study of history and geography to the study of literature. Through this course we hope to make the terminal student aware of the cultural facilities available to him after his formal education is completed.

Such a sequence of learning involves many things—the training of teachers, the development of learning materials, the accumulation of even more knowledge than we already possess about these students, the plain, hard work of developing fundamental understandings and skills, and the delicate task of leading a sometimes reluctant student to an appreciation of the power of an idea, or the beauty of words, or the complexity of thought. We think, however, that working with this group of students is one of our most fundamental responsibilities, and the results to date are encouraging.

There is much more that I could say about our curriculum and our efforts to improve it. I could talk about our foreign-language program, which includes the possibility of a student taking six years of four languages (French, German, Spanish, Latin) and three years of a fifth (Russian). I could describe our work in science, in programmed instruction, in industrial economics, in social studies at the elementary and junior high school levels, in music, and in art. I could discuss our efforts to identify the creative student and to provide opportunities for all of our students to diverge in their thinking. But space does not allow. We have tried to provide a rich and varied curriculum which contains something of worth to all students, but we work continuously toward improvement.

PEOPLE WHO CARE

Not very much that is worthwhile happens to a child except through a teacher who cares. Of all the things in which Newton school personnel are involved, nothing has a higher priority than our continual search for exceptional teachers. We work hard at this task on a nationwide basis—last year the new teachers appointed in Newton came from 32 different states and represented 133 different colleges and universities. We try to be imaginative and flexible in our search and are willing to appoint promising people whose backgrounds are not cast in the usual mold. A former automobile agency owner is now one of our very best English teachers, and a

person of Dr. Richard Douglas, chairman of the department of humanities at M.I.T. Professor Douglas has provided our teachers with first-rate ideas, plus a kind of "spiritual and intellectual lift" that has carried them over many rough spots. We have also called on Professor Arragon, several professors at Amherst College, and Professor Marvin Meyers of Brandeis, as well as innumerable others across the country on a "free-advice" basis.

Another example of our use of outside resources is the Harvard-Newton Project in Business History and Economic Concepts. The goal of this project was to broaden and enrich the social studies curriculum through material which would illustrate the role of economics in our country, especially the concept of the individual in our private enterprise system. Working with Professors Henrietta Larsen, Ralph Hidy, and Arthur Johnson of the Harvard Graduate School of Business Administration and Professor Donald Oliver of the Harvard Graduate School of Education, one of our junior high school teachers, Paul Cawein, has directed the development of twelve case studies demonstrating the function and process of decision-making in American economic life. Through studying these cases, a student develops both historical and economic understanding. These cases have been used both in Newton and in selected school systems throughout the country, an undertaking made possible by substantial financial support from various business and industrial concerns. The results have been so successful that the cases will be published next year by one of the nation's leading publishing firms.

THE NONCOLLEGE GROUP

One of the continuing concerns of the public schools is the education and status of the student not planning to go to college. As the percentage of pupils in the noncollege group becomes smaller, the problem of their training and employment becomes greater. The Newton schools are attempting to provide for them in several ways. First, in addition to the technical-vocational courses already offered in our secondary schools, we are instituting a variety of other terminal programs. Some of these involve our junior college, such as the already existing courses in nursing, electronics, and data processing, and planned courses in medical technology, dental technology, and landscape architecture. Others, such as medical-laboratory-assistant and retailing, will terminate at the twelfth grade to prepare the student who wants to get a job. In addition, a variety of other opportunities, such as a business course or a work-study program, exist for students in this category.

However, vocational preparation is only part of the problem; these students must be generally educated as well. An example of our efforts in this direction is found in the most fundamental of subjects, English. There are

from such varied sources as the Ford Foundation, Harvard-Carnegie Project, United Community Services, School and University Program for Research and Development at Harvard, Association of American Geographers, National Association of Secondary School Principals, Esso Education Foundation, International Business Machines Corporation, Merck Company Foundation, Pittsburgh Plate Glass Foundation, Sears Foundation, Union Carbide Corporation, Young Presidents Foundation, Bay State Milling Company, Cabot Foundation, New England Merchants National Bank, Sheraton Foundation, and the State Street Bank and Trust Company of Boston.

This does not include money we receive from the federal government, or money that has come to organizations of which we are members for work in which we are involved. Nor does it include a grant of \$1,392,000 from the National Institute of Mental Health given in support of a project, sponsored jointly by the Newton schools and the Judge Baker Guidance Center, which will examine methods of identifying and treating children with serious antisocial tendencies and learning disabilities.

Surely this money has allowed us to move more rapidly toward at least partial solutions to some pressing problems; just as surely, we have been able to seek and receive this money and proceed with our work without violating our own integrity or the integrity of the ideas to be developed.

Another source of outside support has been the various colleges and universities in the area plus curriculum groups and academic societies. At the present time, we are working with, among others, the American Anthropological Association, Association of American Geographers, Educational Services, Inc., Princeton Science Project, Harvard Graduate School of Education, Harvard Graduate School of Business Administration, Boston University, Brandeis University, and Amherst College. As an example of the kind of affiliation we seek, the history departments at Amherst College and the Newton high schools have developed a collaborative arrangement which includes regular visitations to Newton by Amherst professors, opportunities during the year for extended discussion of the preparation of teaching materials, and a week-long conference at Amherst at which specific intellectual and instructional matters are discussed in depth.

We try to develop self-criticism in our faculty and staff, and no one is more aware that I of things in the Newton schools that need to be improved. But we need other people looking over our shoulder too, people with different perspectives. And as areas needing improvement are noted and ideas for meeting these needs begin to emerge, these ideas must stand the test not only of our criticism but the criticism of other minds as well.

former business executive is a highly valued elementary school principal.

On the other hand, we are aware that the great majority of our teachers will continue to come from more typical sources, and, therefore, we spend a great deal of time and effort in trying to meet our responsibilities in teacher education. We have established a close relationship with a number of colleges and universities, and in a typical year we will have over 400 student teachers in our schools. We are becoming more deeply involved in a number of other ways: through working with teaching interns; through participating in supervision of students; through joint appointments of teacher-supervisors with colleges and universities; through the concentration of student teachers with a group of regular teachers, thus providing an opportunity for interchange among teachers and students; through the instigation with Harvard of a special program for mature women who want a second career; through allowing—indeed, encouraging—our faculty members to teach at various colleges in this area and elsewhere; through the appointment of a coordinator of student teaching in the high school; through our refusal to accept student teachers from colleges whose program of student teaching was unrealistic or who were not prepared, as individuals, to meet the requirements of our classrooms; through the housing of Harvard's summer program for A.M.T. candidates in our schools and the participation of many of our people in this program; through a willingness to cooperate with Brandeis University in taking the first step toward a joint Brandeis-Newton graduate program for teachers.

All of this, we feel, is good for us, in that it allows those on our faculty who wish to do so to become a part of a teacher-education program without leaving the classroom. Also, it gives us a stake in preparing people who may someday teach for us, and it opens up possibilities for collaboration with universities in a variety of ways.

NEW MONEY, FRESH PERSPECTIVES

In the past, the public schools have been pretty much a closed corporation, with a great deal of "in-breeding" in the development of teachers, with little contact with colleges and universities, and with a rather great dependence upon members of their own group for criticism and fresh ideas. As I see it, collaboration between school people and other groups and individuals is a very good thing, and I am happy that Newton is a part of it.

As more emphasis is being placed on research and development in education, it has become apparent that the local school budget for this purpose must be increased. This the Newton School Committee has done, but the need for this kind of money has grown much faster than can be accommodated by our budget. Therefore, we have sought outside support with some success. During the past three years we have received over \$600,000

director of New York University's Center for Human Relations and Community Studies, put the finger of blame on the neighborhood school as an "island of segregation."

Texas-born Dodson, a leading authority who has served as consultant to a number of cities wrestling with the problems of de facto segregation, warned that other civilizations had crumbled because they amassed large numbers of "marginal peoples" in their cities and let them stay massed, rather than integrate them purposefully into the common life of the community.

"The issue today," Dodson continued, "is whether we will have the moral resolution to see this task through, or whether we will go the way of past civilizations. This task of purposeful integration cannot be accomplished by people hiding from each other in lily-white suburbs, in segregated churches, or in racially imbalanced neighborhood schools. The challenge which de facto segregation presents is not simply whether we will do something for the poor minorities—important as it may be to meet the unique needs that they have—the issue in the larger perspective is whether or not this intergroup relations issue brings us to sufficient confrontation in sufficient time that we in the majority group may save our own souls and preserve our way of life as well."

The issue of de facto segregation and the neighborhood school has been presented to the United States Supreme Court three times in recent years, and three times that Court has refused to pass upon it. This does not necessarily mean that the Court regards the issue as one in which it lacks jurisdiction—it means only that the Court has not yet had brought to it the particular case which presents the crucial issues in terms which would prompt the Court to assert its jurisdiction. Pending a final resolution of the matter by the Supreme Court the best legal guidance available is the pattern of lower court decisions which the Supreme Court has left standing. These seem to suggest that if the school district has not willfully contrived to bring about de facto segregation, if the condition exists because of segregation in housing for which the school is not responsible, the school board may not be compelled to take corrective action.

This does not mean, however, that the school board may not initiate corrective action if it finds a sound educational reason for taking such action. Indeed the lower courts have held, in these circumstances, that the school board cannot be prevented from doing this.

It was in recognition of this legal framework that the Massachusetts advisory committee titled its report "Because It Is Right—Educationally." As State Commissioner of Education Owen B. Kiernan noted in a foreword: "No evidence was found that school authorities had in any way created imbalance. . . . The members agreed unanimously, however, that responsible school officials have both a professional and moral duty to correct imbalance whenever and wherever it is found."

Other Organizational Changes

The Neighborhood School

The neighborhood school, like the comprehensive high school, has been one of the outstanding features of American educational organization. However, recently forces in our society have set in motion movements that could spell the end of neighborhood schools. The forces center around the problem of segregated schools. As long as neighborhoods can be segregated by whatever means possible, the schools can never achieve complete integration. Many advocates of integrated schools see the neighborhood school as one of the last removable barriers to complete integration.

REQUIEM FOR THE NEIGHBORHOOD SCHOOL *

A central element in problems associated with de facto racial segregation in schools of the nation's big cities is adherence to the concept of the "neighborhood school"—a concept which the New York State Supreme Court not long ago characterized as "a tenet of American educational faith."

Whether this tenet is based on the reality of contemporary educational experience, or whether it partakes the character of a myth rooted in nostalgia for a bygone era, is a question posed by University of Maryland sociologist Jean D. Grambs in one of the supporting papers in a report to the Massachusetts State Board of Education on racial imbalance in the schools and what to do about it.

In Massachusetts an advisory committee of distinguished citizens reported in April 1965 that there was marked racial imbalance in the public schools of the commonwealth and, particularly, in Boston. The committee blamed this largely on patterns of segregation in housing, for which school boards had no responsibility, and on rigid adherence by school boards to an out-moded concept of the neighborhood school. The committee proposed various steps to correct this imbalanced condition—concentration of Negro pupils in predominantly Negro schools—and titled its 132-page report: "Because It Is Right—Educationally."

A month before the Massachusetts report, a conference of northern California school board members and educators, meeting at Sacramento to consider problems of de facto segregation, heard Dan W. Dodson,

* FROM *The Shape of Education for 1965-66* by The Editors of Education U.S.A., pp. 52-56. Copyright 1965 by National School Public Relations Association. Reprinted by permission of the Association.

mental attachment to the neighborhood school, in the view Grambs presented to the Massachusetts advisory committee. "Like the county courthouse set in the shaded square," this report says, "the neighborhood school has been seen as a central focus of radiating streets. Down these streets children came and went through the tides of the school day and year. The 'walking distance' school was a reality for all generations before hard surface roads and school buses; if you could not walk the distance (or had no horse to ride), you did not get to school.

". . . A city neighborhood, particularly in a major center, can hardly be thought of as a neighborhood in the smalltown or suburban tract sense. The 'neighborhood' for a dweller in a high density area might be his apartment house. . . . In the case of the slum child whose family moves often there is a clear lack of educational utility in the strict application of the neighborhood school concept. . . .

"What then is the utility of the neighborhood school concept? . . . It no longer has the clientele of previous generations who lived within walking distance of the school and were stable in residence through at least 12 years of schooling. Perhaps nothing has eroded the neighborhood concept more than that of population mobility. . . .

"Why then do we feel that the neighborhood school . . . is worthy of particular attention? The answer appears to be in the nature of the neighborhoods in today's cities. . . . The distinguishing feature of the 'neighborhood' is ethnic similarity. Such areas may not be 'neighborhoods' in any traditional sense of the word. . . . Thus the argument for the neighborhood school can rest from a sociological point of view only on a conviction regarding ethnic similarity or solidarity. The assumption here is that persons of like ethnic backgrounds ought to—or prefer to—send their children to schools where there are mostly others of the same group. This is certainly true when the group is Anglo-Saxon white. It is not true when the group is from other ethnic derivations.

"The member of a non-Anglo-Saxon ethnic group is typically aware of the differences between himself and the white Anglo-Saxon group which appears to control community policies. While the individual may have few illusions about his own chance to change his economic and social position, he, like Americans for 200 years, has a sense of the potential and opportunity for his children. But this opportunity can only come when and as the child learns the dominant majority group culture. The neighborhood school concept, because of the ethnic housing patterns which exist in almost all cities, means that his child is only able to learn and play with others like himself."

Back then to the unanimous findings of the Massachusetts citizens advisory group, which considered, along with much other evidence, what Grambs had to say—

"We are thoroughly convinced," the committee says, "that students

Correction of imbalance often has required busing school children out of their home neighborhoods and into more distant schools. Just about as often this busing has brewed a storm of protest from outraged parents insisting that their offspring should be assigned to the schools nearest their homes. Dodson answers this argument:

"As one listens to the hue and cry about busing these 'poor little children' in order to achieve racial balance, he realizes the ramifications of this adjustment. I am told that the State of California buses about 800,000 youths each year at a cost of \$92 million—in the name of quality education. Buses and central schools have been the salvation of rural children. It is not uncommon that they are hauled 30 miles a day each way for time spans requiring 30 to 45 minutes. Some people who believe this is good education, however, cannot understand why one would expect children to spend 10 minutes traveling by bus to go outside the neighborhood for a desegregated educational experience. In our (New York) area the 'snootiest' education is in private schools. These children are hauled by bus all over town."

The Massachusetts report does not call for outright abolition of the neighborhood school. It does ask the ancient question: Who is my neighbor? And it calls for a new definition of what is a neighborhood school.

"The American public school," the report says, "has often brought together children of different classes and ethnic groups into one classroom as a vivid lesson in democracy. We are convinced that this value must be restored to the neighborhood school and, therefore, that many school neighborhoods must be both enlarged and thoughtfully bounded. In this way, the neighborhood school, which might then be more accurately spoken of as 'the community school,' would act as a force to unite our children, rather than as a barrier to separate them. . . .

"(Our) recommendations . . . will reveal how, through increasing the size of school districts, selecting school sites, and making some revisions in grade organization, the basic values of the American public school are retained and strengthened in a manner consistent with the highly important goal of higher quality racially balanced education."

The "community school" to which the Massachusetts report alludes does exist in America. Flint, Michigan, New Haven, Connecticut, Wilmington, Delaware, St. Louis, Missouri, and Akron, Ohio, can boast, in varying degrees, of their "community schools." But not many other cities.

A newsletter from the National Committee for Support of the Public Schools reminds us that the little red schoolhouse, serving as the focus of neighborhood social and cultural activities, was the original "community school." Its modern counterpart, NCSPS adds, is the school where the board of education is totally committed to coordinated programs utilizing the school as a dynamic neighborhood center, systematically seeking to involve all segments of the community in its activities.

Fond recollection and not present-day reality accounts for today's senti-

many places, however, they are making it possible for fast students to run faster.

Along with more than 500,000 disadvantaged children going to school for the first time this summer under Project Head Start, the 1965 summer school student body will include:

- Baltimore, Maryland, third-graders or above who want to study oceanography, man-in-space, and new countries of the world.
- Gainesville, Florida, elementary school children who will spend two weeks at a special summer camp studying conservation, nature, crafts, water and outdoor safety.
- Ninety student teachers who will earn Harvard University course credit for working with a cross-section of Boston, Massachusetts, urban school population under the Harvard-Boston Summer Program.
- More than 250,000 New York state high school pupils, attending special summer programs for remedial as well as enrichment work (computer math, logical thinking, marine biology, classical heritage, and 19th century Russian literature, as examples).
- Four thousand elementary students in San Francisco, California, attending a free program on enrichment in literature, taught partly by returned Peace Corps volunteers who will dramatize the reading with their own experiences.

These few examples illustrate the slow death of an agrarian tradition which required children to work on the farm during planting and harvesting seasons. As the population became more urban, the summer vacation was still retained but was justified as a recreational need, a breathing time for teachers, and a resting period for children, who, the experts said, couldn't possibly concentrate on studies for more than nine months at a time. Actually, the United States has one of the shortest school calendar years in the world. A UNESCO study of school organizational patterns in 51 other countries shows an elementary school median year of 210 days and a secondary school median year of 204 days. The median year in this country is 180 days.

Of all the patterns that have been proposed and experimented with for extending the school year, an expanded summer session system has been the most successful. A National Education Association survey reports that 92 percent of the urban centers (500,000 population) and four fifths of the cities with more than 30,000 population have conducted summer schools. Summer attendance is growing faster than school enrollment.

In 1963 the New York state legislature directed the state education department to design and conduct experimental demonstrations programs for extending the school year. The five patterns that are in the experimental stage all dip into the summer months as part of the regular school year.

At Commack, Long Island, the continuous school year program operates

attending predominantly Negro schools are denied equal educational opportunity. Racial imbalance is harmful also to white children. . . .

"We believe that the achievement of integrated education is feasible. Educationally sound and practical methods of achieving school integration are available."

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Summer School Programs

The extension of the school year has long been advocated as one means of improving learning. The basic assumption is that the amount of time in school is crucial to both quantity and quality. Many proposals have been made for extending the school year: trimester, four-quarter, and year-round school. All of these may be used in some of the schools of the future. Receiving increasing emphasis is a combination of remedial and enrichment summer school programs. These programs are extensions of the regular school offerings. The next selection shows how the summer schools have grown.

IN THE GOOD OLD SUMMERTIME *

Summer schools are almost 100 years old in this country (the first one was held at the Chautauqua, New York, Institution in 1875), but only in the past few years could they be called much more than the land of the second chance.

Summer schools have been, and the majority still are, remedial. They provide an opportunity for slow students to catch up or for idle students to fill their days with nonacademic courses such as driver education. In

* FROM *The Shape of Education for 1965-66* by The Editors of Education, U.S.A., pp. 45-48. Copyright 1965 by The National School Public Relations Association. Reprinted by permission of the Association.

for New York State, foresees a big future for summer schools. Speaking to the New York State Summer School Principals' Association, he said:

"Legal mandates, college entrance requirements, long-standing traditions, and similar factors tend to limit both the number and speed of modifications that can be made in the secondary school program of the regular school year. The summer session, however, is relatively free of these restrictions. Repeatedly it has been charged that the secondary schools, operating within the confines of conventional subject nomenclature and structured courses of study, fail to deal adequately with the problems of our society and the special problems that perplex and handicap adolescent boys and girls. Here is where the summer school can play a crucial role. . . . Much of our school program concentrates on what a man needs to know. By extending pupils' appreciations and giving them a better understanding of themselves, the summer school will, I believe, provide more opportunities for pupils to learn what a person needs to be."

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for 210 days for elementary school children. Traditional grade lines have been dissolved, and the average or better-than-average students who progress continuously from one learning level to the next will complete the equivalent of a six-year program in five extended years.

Syosset, New York, is offering a modified summer school program to junior high school students. Students attending a summer extension can complete a standard four-year curriculum in three years and three or four summer sessions.

Cato-Meridian (near Syracuse) has an elementary school on a quadrimester program, which begins two weeks before regular school and includes a lengthening of the school day (school year will be equivalent to 240 regular days). The school year is divided into four 51- to 55-day quarters. Average pupils should be able to complete normal two-semester courses in three quadrimesters.

New Rochelle is considering the adoption of an extended school year design which will save one year out of 13.

Also being studied in New York is a trimester plan which divides 204 to 225 days into thirds with pupils completing normal two-semester courses in two trimester sessions.

The primary intent of the legislature in establishing these pilot programs was to save money, but an interim report on their progress in February 1965 indicated that they will also "enrich and intensify the school program." They also will mesh with changing patterns in higher education. The report says:

"Our studies show a number of New York state colleges plus more than 40 colleges and universities in other parts of the country have adopted trimester or four-quarter programs. If these programs are to be successful in terms of an increased use of plant facilities, steps have to be taken to permit more than one input into the colleges and more than one output from the high schools." College officials indicate, according to the report, "that many more high school pupils can be admitted during the school year than parents, students, and guidance counselors realize."

New York already has spent more than \$400,000 investigating an extended school year. Unfortunately, only 14 states provide any state aid for summer schools. In fact, an NEA Committee on Educational Finance study of the legal provisions for summer schools, made in 1964, prompted several states to draw up regulations for summer schools "after having it brought to their attention that their summer schools may be operating illegally in the absence of guidance from the state department." Most summer schools now are financed at least partly by tuition charges.

A new impetus for summer schools may come from the Economic Opportunity Act, whose funds can be used for summer school activities—for migrant workers, dropouts, vocational and technical courses, and adult basic education programs.

Anthony E. Terino, chief of the Bureau of Secondary School Supervision

The Changing Curriculum

New, Creative Programs Needed

Old Programs for New Ones

Of all the educational changes needed for man to adjust to the knowledge revolution, the curricular changes are most important—and the slowest to arise. New knowledge is being discovered every day, but most of the curricular programs are still extremely traditional in content and approach. New discoveries are added to the existing content. The end result is enlargement: the primary method used to adjust curriculum to changing society. The problem becomes one of time-impossibility—not enough time to cover everything. The teacher solves the problem by simply covering the traditional material without moving to the new. To solve the problems presented by the knowledge explosion requires new approaches. The problem presented by traditional programs and approaches is not new; it is only more demanding in our current society. The need for new approaches to meet certain goals is succinctly described in the following selection from Alice in Wonderland.

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"Well, I can't show it you, myself," the Mock Turtle said; "I'm too stiff. And the Gryphon never learnt it."

"Hadn't time," said the Gryphon; "I went to the Classical master, though. He was an old crab, *he* was."

"I never went to him," the Mock Turtle said with a sigh. "He taught Laughing and Grief, they used to say."

"So he did, so he did," said the Gryphon, sighing in his turn; and both creatures hid their faces in their paws.

"And how many hours a day did you do lessons?" said Alice, in a hurry to change the subject.

"Ten hours the first day," said the Mock Turtle; "nine the next, and so on."

"What a curious plan!" exclaimed Alice.

"That's the reason they're called lessons," the Gryphon remarked: "because they lessen from day to day."

This was quite a new idea to Alice, and she thought it over a while before she made her next remark.

"Then the eleventh day must have been a holiday?"

"Of course it was," said the Mock Turtle.

"And how did you manage on the twelfth?" Alice went on eagerly.

"That's enough about lessons," the Gryphon interrupted in a very decided tone. "Tell her something about the games now." . . .

Weaknesses of the Secondary School Curriculum

A canvass of 200 secondary school principals in Minnesota gives the professional view of problems in the curriculum. Fred M. King and James V. Moon analyze the study in four main areas: (1) weaknesses in today's secondary school curriculum, (2) areas that should be explored, (3) factors affecting secondary curriculum change, and (4) suggestions for change.

SECONDARY SCHOOL ADMINISTRATORS LOOK AT CURRICULAR WEAKNESSES *

Fred M. King and James V. Moon

In recent years there has been much criticism of our schools coming from external sources. But how do practicing educators reflect upon these criti-

* FROM *The Bulletin of the National Association Secondary-School Principals*, March, 1964, pp. 10-14. Reprinted by permission of the National Association Secondary-School Principals and the authors.

FROM ALICE'S ADVENTURES IN WONDERLAND *

Lewis Carroll

. . . The Mock Turtle went on.

"We had the best of educations—in fact, we went to school every day—"

"I've been to a day-school, too," said Alice. "You needn't be so proud as all that."

"With extras?" asked the Mock Turtle, a little anxiously.

"Yes," said Alice; "we learned French and music."

"And washing?" said the Mock Turtle.

"Certainly not!" said Alice indignantly.

"Ah! Then yours wasn't a really good school," said the Mock Turtle in a tone of great relief. "Now, at *ours*, they had, at the end of the bill, 'French, music, and washing—extra.'"

"You couldn't have wanted it much," said Alice; "living at the bottom of the sea."

"I couldn't afford to learn it," said the Mock Turtle with a sigh. "I only took the regular course."

"What was that?" inquired Alice.

"Reeling and Writhing, of course, to begin with," the Mock Turtle replied; "and then the different branches of Arithmetic—Ambition, Distraction, Uglification, and Derision."

"I never heard of 'Uglification,'" Alice ventured to say. "What is it?"

The Gryphon lifted up both its paws in surprise. "Never heard of uglifying!" it exclaimed. "You know what to beautify is, I suppose?"

"Yes," said Alice doubtfully; "it means—to—make—anything—prettier."

"Well, then," the Gryphon went on, "if you don't know what to uglify is, you *are* a simpleton."

Alice did not feel encouraged to ask any more questions about it; so she turned to the Mock Turtle, and said "What else had you to learn?"

"Well, there was Mystery," the Mock Turtle replied, counting off the subjects on his flappers, "Mystery, ancient and modern, with Seaography; then Drawling, the Drawling-master was an old conger-eel, that used to come once a week: *he* taught us Drawling, Stretching, and Fainting in Coils."

"What was *that* like?" said Alice.

* FROM *Alice's Adventures in Wonderland* (1864) by Lewis Carroll. Lewis Carroll was the pen name of Charles Lutwidge Dodgson (1832–1898), a story writer and an Oxford professor of mathematics.

establishment of centers for training reading specialists (before we set up rigid certification requirements).

6. National testing programs are forcing conformity on curriculum planners.
7. Our curriculum decisions are based on external pressures and every other consideration except the needs, abilities, and interests of our students.
8. There is no clear definition of goals in the courses we teach. We have a fact-geared curriculum instead of one built around concepts.
9. We have not met head-on the fallacy of objective testing in subject-matter areas and its unrelatedness to our attempt to improve not only the writing ability of our students but also their powers to analyze, interpret, and reach logical conclusions.
10. Industrial arts and vocational education programs have generally outlived their usefulness and should be completely reworked.

AREAS WHICH SHOULD BE EXPLORED

The second question shifted to a selection of priorities for action. Of course, everyone felt that we should go to work on all the problems listed, but proposals for action did center on certain major weaknesses. Again, the ten items mentioned most frequently may be taken to represent the actions most widely desired.

1. Work on the inflexibility of our over-all program, possibly working out a program in which more time (hours per week) can be devoted to some courses and less time to others. (38 weeks of instruction, 5 days a week, cannot possibly fit the needs of more than 2 or 3 out of 30 pupils in a class.)
2. Make curriculum adjustments to fit all levels of learning, with suitable grading systems to meet these adjustments.
3. Study the role of vocational education, skilled trades, and technical education, in the schools. (Establish a means of keeping potential dropouts in school and of training them, even though they never meet graduation requirements.)
4. Build a practical curricular sequence for students in the 80-95 IQ range.
5. Eliminate the Carnegie Unit.
6. Reduce state curriculum requirements.
7. Establish work-school programs for students at every ability level.
8. Plan a program of reading training for everyone in high school.
9. Direct more of our guidance activities toward the non-college-bound student.
10. Promote worthwhile educational research, the results of which will justify curriculum change.

cisms? What are the weaknesses of the secondary school education program as we see them from within? What external factors have affected our school programs? What areas of improvement should be explored by school administrators and curriculum workers at this time? What courses of action should we propose?

To secure an appraisal of secondary education *as it is seen within our own profession*, the authors sent a brief questionnaire to 250 secondary-school principals and directors of secondary education in Minnesota. Over 200 replies were received. They were compiled and analyzed by the Curriculum Department of the Rochester, Minnesota, Public Schools. This article is a summary of the views expressed in these responses. The summary falls into four main divisions: (1) weaknesses in today's secondary school curriculum; (2) areas that should be explored at this time; (3) factors affecting secondary curriculum change; and (4) suggestions, by secondary school administrators, in regard to these forces of curriculum change.

In all probability, when you examine the lists, you will find items which you yourself would not include. Perhaps a representative survey in your state would reveal a very similar list, for almost any item listed here can be considered a recognized weakness in secondary education.

WEAKNESSES OF THE SECONDARY SCHOOL CURRICULUM

Following is a list of weaknesses in today's secondary school curriculum, as reported by over 200 Minnesota secondary-school principals. Below are the first ten according to, and in order of, frequency of mention. Perhaps they can be taken to represent the problems about which principals are most actively concerned. These are presented as possible stimulants.

1. Time allotments for subjects (elective or required) are inflexible. Secondary educators seem to be universally agreed that the Carnegie Unit, as well as many required subjects in grades 7-12, must go if we are to work for effective curriculum change.
2. We lack a program geared to the lower 25-30 per cent of the high school population. Either we should not attempt to keep all pupils in school or we should adapt programs to meet their needs.
3. The State Department of Education should be expanded to the point where outstanding curricular leadership can be provided; the Department should be leading instead of following us.
4. Too many courses are geared for the college-bound. Pseudosophistication is rampant. Are high schools assuming false sophistication by trying to imitate the colleges and creating an atmosphere in which over half the student population feels uncomfortable and out of place?
5. A great need exists for a strong secondary reading program and the

2. Professional groups, through the securing of grants, might be able to provide the best resources for curriculum development. At least our own professional organizations should be both strong and competent enough to determine what constitutes a good school program.
3. The assistance given by outside forces is appreciated, but they must remain supplementary and not directive. (This seemed to be a feeling that most secondary administrators expressed in one way or another.)

A TIME FOR ACTION

The authors of this study hope that this evaluation by members of our own profession will be heeded. Certainly, the diagnoses and recommendations of practical educators should not go unnoticed. The weaknesses on which they have put their fingers are real threats to secondary education in the schools of America. Corrective action, perhaps in the form of a study group sponsored by our own professional organization, is called for and should be taken at once.

The Dropout Problem

Another basic need of our current society is to solve the dropout problem. Each year a million American boys and girls make the wrong decision and leave school. A major cause of this situation is the lack of curriculum designed to meet the special needs of these young people. The following brochure of the United States Office of Education pinpoints the problems along with some practical suggestions for action.

HIGH SCHOOL DROPOUTS: A 20TH CENTURY TRAGEDY *

*U.S. Department of Health, Education, and
Welfare and Office of Education*

An important decision—whether to drop out of school or to remain through graduation. The difference?

The problems facing young people in school are many. One is the important question of deciding how much education is enough.

* FROM "High School Dropouts: a 20th Century Tragedy," a brochure by the U.S. Department of Health, Education and Welfare. Reprinted by permission. First in a series of public information pamphlets on the school dropout problem.

EXTERNAL INFLUENCES

The third question had to do with specific factors that have affected change in our school program. The factors listed in this question tend to be external.

Although some secondary administrators did not feel that the factors listed had been *major* forces in affecting change in our school programs, almost all felt that many changes in our curriculum have resulted from them.

The question was:

"Do you feel that these factors, which have influenced the public school curriculum, should continue to be the major forces affecting change in our school program?"

The responses are shown in tabular form. Only about 150 of the administrators responded to this question. Of these, not all responded to each item.

	<i>Yes</i>	<i>No</i>
National Science Foundation	76	61
National Merit Scholarships	39	91
College Entrance Examination Board	41	89
NDEA	65	61
Philanthropic Foundations	45	81
Professional Education Organizations	121	17
Accrediting Agencies	69	60
External Testing Program	19	98

PROPOSALS

The last question of the survey was designed to elicit suggestions from the respondents in the form of proposals that would give the ball back to professional leaders.

The question read:

"If you do not feel that in general the above forces should continue to alter our secondary curriculum, what alternate course would you propose?"

There were over a hundred responses to this question. Of these, the following seem to be significant. The three listed were most frequently mentioned.

1. Ideally, the State Department of Education should be a step ahead of the schools and lead the way to an improved curriculum. This cannot happen in some states as long as funds are not available to provide an expanded staff to provide service.

WHY DOES HE DROP OUT?

The most frequent reason given by school dropouts for their leaving is simply lack of interest.

This may mean that a student was discouraged over his progress, disliked a certain subject or teacher, or saw no value in what he was studying.

It might mean that he felt excluded from the social life of the school.

Sometimes teenagers drop out to help with the care of the family or to add to the family income. Boys, especially, feel they will have a better chance as wage earners by starting young.

The decision to drop out is frequently made because the student hasn't a real goal in life and is not aware of the probable consequences of his action.

WHAT HAPPENS WHEN HE DROPS OUT?

If the dropout finds work, he may have a period in which he feels he is accomplishing something worthwhile. He has a paycheck and more money to spend than many who stay in school.

But this is usually only temporary.

U.S. Department of Labor statistics show that one out of every six persons in the 16-21 age group is unemployed. Without adequate education, a young man or woman has no access to modern jobs the economy is constantly creating.

Most dropouts will waste their lives because they cannot qualify for jobs in today's demanding world.

"The future of any country is . . . irreparably damaged whenever any of its children is not educated to the fullest extent of his capacity."

—John F. Kennedy

WHAT CAN BE DONE TO SAVE DROPOUTS?

Schools play a most important role in combating the dropout problem. Guidance programs, which have been greatly strengthened in most schools in recent years, can and do provide leadership through their specialized training and experience.

However, *solving* the problem of school retention is not a job for schools alone. It takes the close cooperation of parents, schools, and the individuals and organizations of the community—employers, civic groups, service clubs, labor unions, social agencies.

Here is what some areas have done, with great success:

The choice is a hard one, especially for those who find no joy in class-work. Some see no value in what they are studying. They fail to understand the relationship between more schooling now and their own improved chance for lifelong job success.

A million boys and girls, young men and women, each year, make the wrong decision and drop out of school. By doing so, they doom themselves.

For these persons will have trouble finding work since they are able to compete only for the dwindling opportunities in unskilled labor. They are the last to be hired, receive the lowest pay, and are the first to be laid off. Frequently, their jobs can be taken over by machines.

Before the end of the decade, 7½ million more will be added to the already staggering number of American citizens who are academically and vocationally unprepared for this changing and challenging age.

One out of every three young people in the fifth grade now drops out of school before high school graduation.

This is a 20th century tragedy.

Students, parents, teachers, and interested citizens groups should find out about the situation.

Here is a beginning. . . .

WHO IS THE DROPOUT?

Studies made around the Nation show that slightly more than half of all school dropouts are male.

The largest number of boys and girls who will not finish high school leave early after their sixteenth birthday, usually when they are in grade 10.

Many of them are seriously retarded in reading and arithmetic performance. They are probably failing in one or more scholastic subjects, and are not active in athletics or other extra-class activities. However, a great proportion of them have IQ's which indicate they could continue through high school graduation.

The majority of high school dropouts come from families where school attendance and achievement are not considered as having much value.

In a 1960-61 study in Maryland, for example, it came to light that 70 percent of the mothers and 80 percent of the fathers of these children had never completed high school and that 25 percent of the mothers and 30 percent of the fathers had not progressed beyond the sixth grade.

The dropout's parents usually have jobs requiring only physical energy, and suffer frequent periods of unemployment. The family has little time together, and there is no appreciation of the good which will come from education.

Changing Curricular Programs

Major Program Reforms

As was indicated at the beginning of the chapter, the curriculum is the areas in greatest need of change. Some good beginnings have been made in mathematics, science, and foreign languages. Major efforts are being made in English, social studies, and vocational areas. Several of the new ideas and programs are presented in the remaining selections in this chapter.

Some of the more impressive curricular program changes have occurred on a national basis with financial assistance from the federal government and foundations. The School Mathematics Study Group, the Physical Science Study Committee, Biological Science Curriculum Study, National Defense Education Act programs in languages, and Project English are examples of these organized efforts. In addition to the program changes and improvements that have been effected, the rate of acceptance and implementation in schools has been remarkable as compared to the typical adoption period probably because of the process of extensive involvement.

A summary of these programs follows.

INNOVATION AND EXPERIMENT IN EDUCATION *

*The Panel on Educational Research and Development
to the U.S. Commissioner of Education et al.*

MATHEMATICS

Curriculum reform in mathematics was the earliest activity of the movement that has since come to be considered the new wave of educational research and development. As early as 1951 Max Beberman and others at the University of Illinois had begun to undertake a massive reform of the mathematics curriculum for the secondary school. From this program there later developed, also at the University of Illinois, under David Page, a similar program in elementary school curriculum.

Both these programs were ambitious, and both have had national im-

* FROM "Innovation and Experimentation in Education," by the Panel on Educational Research and Development to the U.S. Commissioner of Education, the Director of the National Science Foundation, and Special Assistant to the President for Science and Technology, March, 1964, pp. 49-55. Reprinted by permission.

- Detroit has a job-upgrading program by which the schools and local employers cooperate in basic academic and vocational classes and on-the-job training.
- Chicago has a similar program, in which the students work for wages part time and stay in school the rest of the time to improve job skills.
- New York and several other large cities have comprehensive school-community programs aimed at improving the social outlook of underprivileged groups so that they will understand and appreciate the basic importance of education.
- In Oregon, full-time employment on forestry projects in summer camps has dramatically revitalized the interest in school of scores of potential dropouts.
- San Francisco, Kansas City, Racine, Philadelphia, St. Louis—and numerous other urban and rural communities of the Nation—have come up with programs to combat dropouts. The main emphasis in most cases is on providing situations to interest young people in work which will, while restoring their self-respect now, also reveal to them the value of school.

SOURCES OF HELP IN PLANNING COMMUNITY-WIDE PROGRAMS

The Federal Government provides leadership and assistance in setting up programs to encourage youth to continue in school. Interested community groups may write directly to the U.S. Department of Health, Education, and Welfare (Office of Education, National Institute of Mental Health of the Public Health Service, and Welfare Administration) and the Department of Labor for information.

SUGGESTED READING

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- WEARY, BETTINA. *School Dropout: Selected and Annotated References*, a list of studies reported in professional publications. Washington, D.C.: U. S. Department of Health, Education, and Welfare, Office of Education.

one might even say that it is too well served; too often the teacher is confronted by a bewildering choice of new materials, without any criteria to help him choose from among them.) It is true that mathematics is the most tractable of all disciplines. Nonetheless, the achievement has been remarkable. Real changes have been made in mathematics education over the past 5 years, and there is good reason to believe that the process will continue.

SCIENCE

Mathematics education has traditionally been conducted as a continuum, beginning with kindergarten and continuing without interruption until the student is graduated from secondary school. Thus the SMSG could anticipate, in principle at least, a coherent mathematics curriculum that would extend over 13 years. However, with a transient school population there are difficulties inherent in a 13-year program as compared to individual 1-year courses such as the science courses in high school.

As a discipline, science too is coherent, but in the educational process it has never been treated coherently. Below secondary school the student may or may not encounter science in any given year, and what he meets in one year is likely to have little relationship to what he has previously met, or what he will meet further along. In the secondary school, science divides into its separate disciplines.

The first of the major science curriculum reforms was the Physical Science Study Committee, and, as its name suggests, it began to revolt against the fractionation of chemistry and physics at the high school level into separate disciplines. This revolt was short-lived; it proved impossible in 1956 to bring physicists and chemists under the same roof, and the PSSC proceeded to devote its efforts exclusively to physics. In doing so it set a model for later curriculum programs in science, and the fractionation has persisted. Chemistry, biology, and physics, at the secondary school level, have each come to be dominated by a single major program; a secondary (and in fact earlier) program in chemistry has been influential but has never been widely adopted, and a new program in physics is only now developing.

PSSC was born of the enlightened conjuncture of the National Science Foundation and the Massachusetts Institute of Technology. It was the first of the massive curriculum reforms, and it continues in operation, although at a much lower level of activity. A forthcoming revision of the PSSC text will not differ in any great degree from the original text. It is reasonable to say that what was, only a few years ago, a research and development program is now in the educational mainstream. (To say this does not mean

pact. The major mathematics program, however, has been that of the School Mathematics Study Group (SMSG), which, with support from NSF, was set up in 1958 at Yale University under the direction of Edward Begle and which is continuing under his direction at Stanford University. During its 5 years, SMSG has enlisted the efforts on a large scale of university mathematicians, teachers, and school administrators. The materials produced by SMSG are widely used at the high school and junior high school levels and are now beginning to be used in the lower grades. SMSG has also made first efforts to adapt its materials for slower learners.

The prodigious efforts of SMSG have not deterred others from engaging in this activity. Other major programs in mathematics, most of them directed toward the lower grades, include the Madison Project at Webster College, under Robert Davis; the Minnemath Program at the University of Minnesota, under Paul Rosenbloom; the Stanford University Arithmetic Program, under Patrick Suppes; the University of Illinois Committee on School Mathematics, under Max Beberman; the Ball State Program; and the Maryland Program.

This listing does not pretend to be exhaustive. Regional and local programs exist in every part of the country, most of them devoted to the preparation of new materials for Advanced Placement courses or for the more talented students. Almost all of these smaller programs have been affected by the flow of ideas from the University of Illinois and SMSG, and there is a substantial exchange of personnel among the various programs as well.

It should be noted, also, that new programs are still being devised. The most ambitious of these, to be directed by the Mathematical Association of America, will provide films for use in colleges and in teacher retraining.

Mathematics reform, in fact, is now sufficiently advanced to have entered into a second phase. During the summer of 1963 a group of distinguished mathematicians and natural scientists gathered in Cambridge, Mass., to look beyond current activities into the needs of the future. Their report, *Goals for School Mathematics*, sets forth tentative recommendations for the next wave of curriculum reform in mathematics. Its implications for the training of teachers are far-reaching, for it can be said that elementary school teachers prepared to cope with the curriculum recommended by the Cambridge Conference are numbered today only in the hundreds, and that equivalently trained secondary school teachers are only slightly more numerous. Nor are new teachers being produced who might handle this more advanced mathematics; only a radically new approach to the teacher-training problem is likely to meet the needs created by the new curricula.

In sum, educational research and development in mathematics is currently being well served. (From the point of view of the classroom teacher

physics and understand something of it when they leave school; such a course, moreover, could be prepared with the same attention to quality and intellectual rigor that characterizes the existing physics, chemistry, and biology courses.

It may well be that the time is ripe for attention to these considerations. In a sense, the very size of PSSC and its drain upon the small community of physicists may have choked off further programs. PSSC's demands on the academic community are now small, at least at the secondary school level. A new program is now being mounted at Harvard College and the Harvard Graduate School of Education; it will see physics from another viewpoint. Meanwhile, a version of the BSCS program, for students who are not college bound, is being tried out in half a dozen high schools.

In the earlier grades the start was made somewhat later, and there is considerably less to show. Moreover, the task is far greater—it appears, in fact, that in the task of curriculum reform it will always be the early grades that demand the highest degree of skill and the greatest intensity of attention.

Stimulated in large part by the National Science Foundation and the American Association for the Advancement of Science, major programs for the early grades are now in their early stages throughout the country. The AAAS itself has a group at work under the direction of John R. Mayor. An earlier program conducted by Educational Services Incorporated (a non-profit research corporation) and modeled closely after PSSC is progressing rapidly, as are two programs at the University of California (Berkeley), a program at the University of Illinois, a program at the University of Minnesota, and several others. *The impact of these programs on the schools* has yet to be widely felt, but it will not be long delayed.

Two other activities, which do not fit neatly into the foregoing categories, are also in progress at Educational Services Incorporated. One of these deals with general science for the ninth grade; some text material and laboratory experiments have already been produced, and the program is proceeding at good speed. A second program, dealing in the large with social studies for the earliest grades, will make much use of anthropological and archaeological films, and support has been received from NSF for that portion of the program; a byproduct will be material in anthropology and archaeology for use in later grades.

So far as the Panel is concerned, the greatest danger in the sciences and mathematics is that the present momentum will be spent while so much still remains to be accomplished. Two of the immediate needs were mentioned above in connection with the deficiencies of existing secondary school programs. In the near future, urgent new needs will appear, for as new curricula are introduced in the early grades, courses only lately revised for the secondary schools will be superseded. (Such a process has already taken

that nothing remains to be done in physics at the secondary school level.)

In biology, the American Institute of Biological Sciences entered the field soon after the formation of PSSC with the Biological Sciences Curriculum Study. BSCS set out to produce not one but three distinct textbooks, each attacking the discipline in its own fashion. Like PSSC, BSCS has now completed the major part of its task.

In chemistry, the earliest effort was made at Earlham College by a group which called itself the Chemical Bond Approach Project (CBA) and which provided a text and related materials. Somewhat later a more broadly based program, patterned after the PSSC and BSCS, was initiated at the University of California (Berkeley) and at Harvey Mudd College; it was known as the Chemical Education Materials Study (CHEMS). The work of CHEMS is now proceeding toward completion, with a textbook, laboratory equipment, and a battery of teaching films.

Thus, in a large sense, the teaching of science in the secondary schools has drawn the attention of the best scholars and teachers across the nation, and they have accomplished the task they set themselves. But although there is much reason for satisfaction with the outcome, there are major deficiencies as well.

One of these has been indicated above. The division of science, at the secondary school level, into biology, chemistry and physics is both unreasonable and uneconomical.

Ideally, a 3-year course that covered all three disciplines would be far more suitable than a sequence of courses which pretends to treat them as distinct. Today, such a 3-year course would be difficult to fit into the educational system, but much of this difficulty might be overcome at once if such a course existed, and it might well be that present tendencies in education would soon overcome the rest.

In any case, a greater coordination of the three subjects is possible even within the existing framework. It is understandable that the groups which developed the existing programs, each of which faced great problems of its own as it worked toward its goals, were reluctant to embark on the larger task of giving coherence to the sum of their efforts. With the programs now complete or approaching completion, it may be that the time has arrived for this necessary next step.

A second deficiency lies in the fact that the programs are directed toward the college-bound student and attract the more talented students. The PSSC course, for example, despite its great dependence upon laboratory work, appeals to those who cope best with the abstract and with the great generalizations; the laboratory is used primarily to direct their attention to the abstract. Availability of a course which gave greater attention to the applications of physics might double the number of students who study

area such as South Asia, the Near and Middle East, Sub-Saharan Africa, or the Soviet Union. More than 70 different languages are taught at the centers. In 1962-63 more than 7,000 students were enrolled in some 700 language courses at NDEA centers. No less significant has been the strengthening of instruction in related-area studies necessary for a full understanding of the regions where the languages are used. The number of area-related courses in such disciplines as economics and geography has more than doubled at the centers. In anthropology and sociology the number of courses offered rose from 58 in 1959 to more than 150 2 years later. The larger centers now have at least one area specialist in each of the major disciplines.

The language research and studies program has been instrumental in opening up great new vistas in language learning. Instructional materials are in preparation in more than 120 languages heretofore rarely or never taught, and 180 different textbooks or other specialized materials in 56 of these languages have already been completed. A long-term project has been producing wholly new courses of study in French, German, Italian, Russian, and Spanish for secondary schools. Over 1½ million students have begun language study with these modern materials, and the publishing industry, stimulated by the quick and enthusiastic acceptance of these modern materials by teachers and pupils, is casting aside outmoded traditional textbooks and developing excellent competitive new courses.

With the objective of increasing sophistication in language learning, the Office of Education has initiated a host of projects in experimental and basic research. The effective use of electronic equipment is being explored; programed courses in Chinese, Russian, Thai, Spanish, and French are in developmental or tryout stages; support for attitudinal and motivational studies has been provided; phonetic analysis has been made of special features of spoken Chinese, Arabic, and Russian; speech perception and control are being investigated; and the intricate concepts of language-learning theory are being explored.

ENGLISH

Except at the graduate and professional level, more hours are devoted to instruction in English than to any other subject. More than 90,000 secondary school teachers and more than 11,000 college and university teachers are engaged primarily in teaching English, while almost all of the nearly 900,000 elementary school teachers devote a substantial portion of their time to this task. The teaching of English appears in various guises as the student progresses through the school—language arts, reading (readiness, remedial, developmental), literature (English, American, world, comparative), writing or composition (advanced, creative), grammar (English,

place in the colleges, where the success of curriculum reform in the secondary schools has made it clear that fundamental changes in college courses must be made soon.) At a second remove, the greater mathematical sophistication of young students must ultimately be reflected in the use that is made of this sophistication in science courses: science without the calculus is quite different from science with the calculus, to mention what is truly only the most trivial of the considerations which must soon be taken into account.

But if the danger exists, it can at least be said that at present the momentum exists as well, that the climate today is such that mathematicians and scientists are willing to turn their hands to these programs, and that funds are being made available to them. The Panel applauds these efforts and will use whatever influence it may possess to see that they continue undiminished.

FOREIGN LANGUAGES

The U.S. Office of Education has assisted in revolutionizing the teaching of modern foreign languages, mainly through programs of the National Defense Education Act, initiated in 1958. With the support of Federal matching funds, 55 language-and-area centers have been designated at 34 institutions of higher education. More than 2,000 students have been awarded graduate fellowships to study 1 of more than 60 languages which previously had been studied infrequently or not at all, and small programs of undergraduate and postdoctoral awards have been established for the same purpose. Another 652 3-year graduate fellowships have been awarded to prepare teachers of the commonly taught languages, such as French and German.

Some 224 language research projects have been undertaken under contract. Nearly 14,000 elementary and secondary school teachers of modern foreign languages—approximately one-fourth of the total number—have attended 301 NDEA summer and academic-year institutes. The availability of matching Federal funds has encouraged the installation of nearly 6,000 electronic language laboratories in public schools, compared with the 46 that existed in 1958, and Federal funds helped increase the number of State-employed foreign language supervisors from 8 in September 1958 to 60 in February 1964.

These comprehensive developmental programs have had a tremendous impact in a field of study which, until recently, was little more than a tradition-bound, neglected segment of our educational curriculum. A brief look at two NDEA programs will give some measure of what is happening.

Each of the 55 NDEA language-and-area centers deals with some world

DEVELOPING AN INDIVIDUALIZED, CONTINUOUS PROGRESS CURRICULUM UNIT EMPHASIZING CONCEPTS AND BEHAVIORAL OBJECTIVES *

Glen F. Ovard

A MODEL CURRICULUM UNIT

Rationale for a Model

A curriculum unit is a written plan covering a specified subject area which sets forth the educational concepts, behavior objectives, teaching-learning activities and resource materials. While a curriculum unit broadly covers a given area, a daily lesson plan is specific—usually confined to the behavioral objectives, teaching-learning activities and resource materials related to a single concept or sub-concept to be presented in a single day.

The model described hereafter is for a unit of work. The model form does not need to be copied. There are different approaches i.e. inductive, deductive, which might require additions to, deletions from or changes in the model. The model is meant to be a guide from which a teacher will make modifications as required.

The description of the model as set forth can be used in nearly all teaching-learning situations. However, the emphasis of this project has been on "Methodology of Developing a Continuous Progress Curriculum." Such a curriculum is based upon individual differences of students. There are two major provisions for such a curriculum.

(1) The curriculum must be organized so that students can progress through the curriculum content moving from concept to concept without artificial barriers interrupting the logical sequence of work. If the knowledge of one concept is needed to perform the task or to learn a succeeding concept, the concepts must be organized in a vertical sequence. Such a sequence requires the presentation and learning concept "A" before concept "B" and concept "B" before concept "C." It should be understood that not all curriculum areas require complete vertical sequencing of concepts. However, most curriculum areas will have concepts and skills within

* FROM *Developing an Individualized, Continuous Progress Curriculum Unit Emphasizing Concepts and Behavioral Objectives* by Glen F. Ovard. Published by Program of Individualized Instruction of The Rocky Mountain Educational Laboratory, Denver, Colorado, 1967. Reprinted by permission.

usage, linguistics, semantics), and communication. But despite this enormous investment in instruction in English, many students when they leave school do not read well enough or write well enough to meet the practical demands of our times. Nor have many students come to value and enjoy literature.

The U.S. Office of Education has set up its Project English to help improve instruction in English from kindergarten through college and graduate school. The project is recent, and the funds so far available are considerably less than the funds currently devoted to improving instruction in mathematics, the sciences, and foreign languages. Project English includes support of curriculum study centers at 11 universities, demonstration centers, projects of basic and applied research, and planning conferences.

Several of the curriculum study centers are developing sequential programs in English that build upon recent work in linguistics, literary analysis, criticism, rhetoric, and logic. Emphasis is placed on teaching students how to write clearly and effectively. One center is devoted to developing curricular materials and teaching guides addressed to the special problems posed by children from disadvantaged environments. The demonstration centers, as the name implies, are devoted to demonstrating to the educational community new educational techniques and materials. A junior high school program in English is being demonstrated at one center. Observers have an opportunity to visit classrooms as well as to attend lectures and conferences. At other centers, sets of films are being developed, on teaching reading in secondary school and on teaching literature—poetry, drama, the short story, and the novel.

Self-Paced, Continuous Progress Units

The recent "rediscovery" of individual differences has placed a major emphasis on the individual learner—his capabilities, his achievement, his interest. A plan for individualized progress through the curriculum known as "The Continuous Progress Plan" was developed at the Brigham Young University Laboratory School. Modified versions of continuous programs may now be found around the nation.

A major problem in the development of continuous progress plans has been the lack of curricular materials developed for such an approach. Some commercial materials are now available. Many schools have found it necessary to supplement and develop some of their own materials. The following selection by Glen F. Ovard presents a descriptive model and example based on the model for the development of an individualized, continuous progress curriculum unit emphasizing concepts and behavioral objectives.

formance of a task such as, playing an instrument, sitting-up exercise, assembling objects, sawing a board. There are degrees or levels of performance associated with the skill development. The curriculum unit may be composed of all skills, all concepts or mixtures of both concepts and skills.

The concepts and skills are usually identified with or as part of the curriculum content of the unit.

(4) **TEACHING-LEARNING ACTIVITIES.** The teaching-learning activities consist of all the activities which are to be performed or engaged in by the teacher and the student that are necessary to reach the understanding of the concepts or competency required in the program objectives. Examples of teaching-learning activities are reading, writing, listening to a tape lecture, taking a test, etc.

(5) **TEACHING-LEARNING RESOURCES.** The teaching-learning resources consists of all materials, supplies, books, equipment, objects, artifacts, personnel—in short all resources—which are used by the teacher and/or the student while engaged in any of the teaching-learning activities.

(6) **PERFORMANCE MEASURES.** The performance measures are instruments or means by which the specific behavioral objective is measured. The measurement instrument can involve oral or written tests, completion of a project, ability to play a score without error, or other observable, performance. Whatever the means or instruments used, the performance measure must either show the teacher and the student that the behavioral objective has been learned or show the degree to which the behavioral objective has been learned. Thus the teacher and student should know whether they should continue their progress in the curricular unit or units or go back and review or engage in additional teaching-learning activities for a better understanding or development of the concept or skill (re-cycling).

(7) **PROVISIONS FOR INDIVIDUAL DIFFERENCES AND CONTINUOUS PROGRESS.** Each individual student is different in his ability, interests, motivational patterns and needs. It should be recognized that as a member of society the student needs a minimum competency or understanding in a given curriculum area. The degree of competency of each individual student must be defined. There are two basic standards that must be considered: quantity and quality.

(a) *Quantity Standard*—A quantity standard must be built into the unit or become supplemental to the unit. As related to the curriculum unit the following questions might be asked: What must every student know? What must some students know? What must student "A" know? Another way of

a given unit of work which are dependent upon previous concepts or skills. The organization of the unit should accommodate this type of vertical or dependency sequencing.

(2) The curriculum must be organized so that the student can progress through the curriculum at his own rate of speed commensurate with his abilities, motivation, interest and other factors relating to individual differences. In other words, the curriculum unit must have provisions for individual differences and progress.

Characteristics of a Model Unit

A curriculum unit which is built around the individualizing instruction and continuous progress education provides for the following:

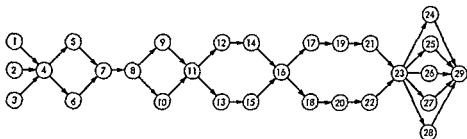
(1) **BROAD EDUCATIONAL OBJECTIVES.** These objectives relate the purpose of the unit to the objectives of the total course.

(2) **SPECIFIC UNIT BEHAVIORAL OBJECTIVES.** These objectives are specifically oriented to the purpose of the unit and to the expected behavior of the student upon completion of the unit. These behavioral objectives should be stated so that the learning of the student can be measured and evaluated.

(3) **SPECIFIC CONCEPTS, SUB-CONCEPTS AND SKILLS TO BE LEARNED.** A concept is a complete and meaningful idea that is found in the mind of a person. It is a subjective mental image of what the person has seen or perceived in his experience. At the simple concrete level, the concept may be the mental image of an object or event. At the abstract, complex level, a concept is the mental image of a synthesis of a number of conclusions of a person which are based upon the experiences related to the concept; such as commutative property, gravitational force, love or loyalty. Since a concept becomes subjective to each person and to his peculiar set of individual experiences and inferences, it is critical to the instructional process that the concept be explicitly defined and set forth. Otherwise the teacher may think that the concept has been learned; yet the various students may have various mental images such as those described in the famous story of the "Blind Men and the Elephant."

The major concepts and related sub-concepts to be learned by the students should be in writing. Since words such as love, car, race, elephant, loyalty, and commutative property create different mental images in the mind of each student, the concepts should be stated (written) in simple, concise sentences. In this way, the concept can be given specific meaning which becomes common for all students.

In some curriculum units skills are also emphasized. A skill is the per-



1. Unit defined.
2. Title assigned.
3. Broad objectives relating unit to total course identified.
4. Content determined.
5. Major concepts identified.
6. Minor concepts identified.
7. Specific behavioral objectives identified.
8. Type of package for instructional unit determined.
9. Self contained kit of related materials and teacher helps identified.
10. Self directed study guide with references to multiple sources for resources with appropriate teacher helps identified.
11. Teaching-learning approach identified.
12. Inductive, unfolding, presentation approach determined.
13. Deductive rediscovery, problem solving approach determined.
14. Identified concepts basic understanding skills, etc. are placed in the teachers and students package.
15. Identified concepts are placed in teachers package but not in the students package.
16. Identified behavioral objectives, skills, basic understanding, etc. are placed in the instructional packages.
17. Teaching activities identified and placed in the teachers package.
18. Learning activities identified and placed in the students package.
19. Teaching resources identified and placed in the teachers package.
20. Learning resources identified and placed in the students package.
21. Performance measures for evaluation of the student by the teacher are identified and placed in the teachers package.
22. Performance measures for student self evaluation are identified and placed in the students package.
23. Provisions for individual difference are identified.
24. Two or more tracks or unrelated approaches to the same concept established and written into the instructional package if desired.
25. Two or more levels or phases of difficulty leading to the same concept are established and written into the instructional package if desired.
26. Quest program in which a student searches in depth about a concept is written in the instructional package if desired.
27. Individualized analysis and prescription for each student is developed and written into the instructional packages if desired.
28. Other ways of individualizing instruction are developed and written into the instructional packages.
29. The unit is completed.

Figure 1. A Model Flow Diagram. (Source: Glen F. Ovord, *Developing an Individualized Continuous Progress Curriculum Unit Emphasizing Concepts and Behavioral Objectives*. Published by the Program of Individualized Instruction of the Rocky Mountain Educational Laboratory, Denver, Colorado, 1967. Reprinted by permission.)

stating the problem would be: What is necessary for all students? What is desirable for *all* students? What is *necessary* for student "A"? What is desirable for student "A"? Approaches constructed in the unit to provide for the quantity standard might be:

- (1) tracks—two or more unrelated approaches to the same concepts.
- (2) levels—two or more approaches to the same concept in which levels of hardness or difficulty is present. (Versions with degrees of simplicity or complexity.)
- (3) rank order presentation—going from easy to complex while still on the same concept.
- (4) teacher prescription through analysis and selection. The teacher analyzes the needs and potential of each student and prescribes for each student the quantity of content and activities suitable to the student.
- (5) Quest Program in which the student pursues in depth an area within the curriculum. The student is usually working by himself in such a program.

(b) *Quality Standard*—The understanding of a concept or the competency skill is also defined in measurements of quality. The quality standard is concerned with the degree of competency. As related to the behavioral objective, the following questions might be asked: Must all students demonstrate proficiency at the same level of competency? If so, what level is satisfactory—100%, 90%, 80%, 70% etc? Are some concepts or skills so fundamental that 100% competency must be established prior to progressing to the next concept or skill? If the same degree of quality competency is not required of all students, what is expected of each individual student?

In addition to quantity and quality measurements, individual differences can be provided through the variety of teaching-learning activities available to the student while learning each concept. A multitude of resources should be available. The *ideal* in both teaching-learning activities and resources would be reached only when each student could be provided many alternative approaches by which he might gain understanding of the stated concepts.

A MODEL FLOW DIAGRAM—The Flow diagram as shown in Figure 1 provides a step by step process in constructing a unit.

SEGMENTS OF MODEL CURRICULUM UNITS—Two different approaches to unit construction at different levels representing contrasting subject areas are presented below. Sufficient content from each unit is given to show how each step or characteristic described above is incorporated in curriculum units.

"The Uses of Great Men"

"The Story of Joseph"

Cyrano de Bergerac

4. All men have values whether they be heroes and archangels or fools, defeatists, and imposters.

"The Uses of Great Men"

"The Greatest Man in the World"

"A Mystery of Heroism"

"The Love Song of J. Alfred Prufrock"

Face of a Hero

5. Heroism is shown when someone displays high courage in reaching an important goal.

"The Greatest Man in the World"

"A Mystery of Heroism"

"The Story of Joseph"

6. The term "unsung hero" is somewhat self-contradictory; to be a hero a man must be great and he must be recognized.

"Uses of Great Men"

"The Greatest Man in the World"

"A Mystery of Heroism"

7. If one dies at a moment of glory, he will more likely be remembered as a hero than he will if he "fades from fields where cheers have long since died away."

"The Greatest Man in the World"

"To an Athlete Dying Young"

"Ex-Basketball Player"

"The Unknown Citizen"

8. Legendary heroes, men "fashioned forth as an apparition," though exaggerated beyond belief, personify qualities which mankind considers to be important.

"Paul Bunyan of the Northwoods"

The Odyssey

"Lochinvar"

"Robin Hood Rescuing Three Squires"

"The Ballad of William Sycamore"

9. Poetry, folklore, art, and legend frequently make great men into symbols. When this happens, many great historic accomplishments may be forgotten and supplanted by lesser achievement or by fictitious deeds.

EXAMPLE #1. FROM A TWELFTH GRADE LITERATURE UNIT

Unit Title: Images of a Hero¹ (This unit uses the discovery approach)

General Course Objectives

1. The central objective of this course is to challenge the student to think and to search in a personal way for answers to the great questions of human existence and to provide a context within which he can develop his thoughts, his ideals, his values, and his goals.

2. Another objective of the course is to offer representative writings that will, taken individually, provide genuine enjoyment and/or intellectual stimulation and, taken together, will direct the student's attention to the most exciting and enduring message of literature—man's unending search to discover himself and his purpose in the great cosmic scheme of things.

3. A third objective of the course is to achieve through the choice of selections, commentaries, questions, and all other aspects of unit development a level of difficulty and maturity which is suitable and stimulating for students in their final year of secondary education who are either going on to college or else to the even more perplexing responsibilities, civic and personal of being young adults in a challenging and anxious world.

Unit Concepts (related literature to teach the concept is shown)

The student should discover these and other concepts through his reading, analysis, writing and discussion—a partial listing only—

1. It is natural to believe in great men.

“The Uses of Great Men”

2. Heroes are the men through which other men measure themselves. They show us how to meet life, to come to grips with it, to understand it better, and to accept it with courage.

“The Uses of Great Men”

“The Greatest Man in the World”

“The Story of Joseph”

3. Qualities abide; men who possess and exhibit qualities pass away but qualities live on, adorning other lives.

¹ Modified from Hendrickson, A. LeMar, “Images of A Hero,” *Education Experimental Programs and Laboratory Schools*, Brigham Young University, Provo, Utah, 1966.

*The Middle-Aged Man on the
Flying Trapeze (UL)*

- | | | |
|---------|-----------------------------------|----------------------------|
| (1-2-3) | "A Mystery of Heroism" | Stephen Crane |
| | <i>Types of Literature</i> (Ginn) | |
| (1-2-3) | "Ex-Basketball Player" | John Updike |
| | <i>Pro and Con</i> (HM) | |
| (1-2-3) | "Paul Revere's Ride" | Henry Wadsworth Longfellow |
| | <i>Story Poems</i> (PB) | |

The Epic Hero

- | | | |
|-------|-----------------------|-------|
| (1-2) | <i>The Odyssey</i> | Homer |
| | Purchase at Bookstore | |

Other Tales of Heroes

- | | | |
|---------|--|----------------------------|
| (1-2-3) | "Robin Hood Rescuing Three
Squires" | Author Unknown |
| | <i>Adventures in English Literature</i> (HB) | |
| (1-2-3) | "The Village Blacksmith" | Henry Wadsworth Longfellow |
| | <i>A World of American Literature</i> (ABC) | |
| (1-2-3) | "Lincoln, the Man of the People" | Edwin Markham |
| | <i>The Treasury of Great Poems</i>
(Perma Book) | |
| (1-2-3) | <i>Cyrano de Bergerac</i> | Edmond Rostand |
| | Purchase from Bookstore | |

The Modern Hero

- | | | |
|---------|---|-------------------|
| (1-2-3) | "The Undefeated" | Ernest Hemingway |
| | <i>Stories</i> (HB) | |
| (1-2-3) | "The Unknown Citizen" | W. H. Auden |
| | <i>Adventures in English Literature</i> (HB) | |
| (1-2-3) | "The Hero" | Siegfried Sassoon |
| | <i>The World and Our English Heritage</i> (ABC) | |
| (1-2) | "The Love Song of J. Alfred
Prufrock" | T. S. Eliot |
| | <i>Treasury of Great Poems</i>
(Perma Book) | |
| (1) | <i>Face of a Hero</i> | Pierre Boulle |
| | Purchase at Bookstore | |

Students will write questions about each selection which are designed to help the student discover basic concepts about heroes.

"Paul Revere's Ride"

"Paul Revere"

"Columbus"

"Daniel Boone"

10. An epic is not an accurate historical account of a period; it is history compressed into a single lifetime; it is an artistic interpretation of an age.

Behavioral Objectives—partial listing only—

Upon completion of this unit, the student should:

1. Be able to write an extended definition of the hero.
2. Be able to discuss in small groups, by using logical explanations and examples based on his reading, the role that hero literature can play in his search for significant values.
3. After having read *The Odyssey*, be able to demonstrate in discussions and tests that he had a knowledge of the major characters and events in this great epic and that he can explain its significance as an example of epic tradition.
4. Be able to write the characteristics of an epic poem.
5. Be able to demonstrate an understanding of all the hero selections in the unit by explaining orally and/or in writing what each selection contributes to the idea of the hero and what each selection means to him.
6. When he meets such literary terms as *epic*, *comedy*, *tragedy*, *satire*, *alliteration*, *melodrama*, *allusion*, *irony*, *ballad*, *anti-hero*, *romanticism*, and *realism*, be able to define the word and to apply it to the literature being studied.
7. Be able to recognize the subtle, symbolic, artful qualities of a literary selection and to make a plausible analysis and statement of meaning of what he thinks the author was trying to express through these techniques.

Teaching-Learning Activities

For learning activities the students will read selections. Selections are marked for levels of difficulty. Sample of these selections and level of difficulty (1-2-3) are shown below. (Level of difficulty: 1 most difficult)

Mysteries of Heroism

- | | | |
|---------|---------------------------------|---------------------|
| (1-2-3) | "Uses of Great Men" | Ralph Waldo Emerson |
| | <i>Great Essays</i> (WSP) | |
| (1-2-3) | "The Greatest Man in the World" | James Thurber |

will evaluate on a checklist provided each student's understanding of the concepts to be discovered, the ability to interrelate concepts having common elements.

At established checkpoints, the student must pass, at his assigned quality level, tests used to measure overall competency and understanding of the required selections.

Provisions for Individualizing Instruction

Individual differences are provided through:

- 1) Basic reading of varying ability levels (1-2-3).
- 2) Supplementary reading for those desiring depth.
- 3) Self directed unit guide which allows each student to progress at his own rate.
- 4) Qualified teacher and teacher-aid who are "on-call" for any student at any time during the assigned English period.

EXAMPLE #2—ALGEBRA II

Unit Title: Language and Symbols of Algebra²

Objectives

Upon completion of the course the student should be able to:

1. Demonstrate a knowledge of the structure of the real number system and its basic properties.
2. Demonstrate ability to use a logical orderly approach to solving verbal problems involving variables of at least degree two and in at least two unknowns.
3. Be able to operate within the realm of the reals with respect to addition, subtraction, squaring, absolute valuing and their inverse operations.
4. Be able to find the solution sets of equations and inequations up to and including degree two and in two unknowns, by graphing and manipulation techniques.
5. Be able to organize information in two variables, or in one variable and a constant into a graphical representation of the relationship between them.

² Modified from "Study Guide and Objectives for Algebra I" Mathematics Department, Brigham Young University Laboratory Schools and Education Experimental Programs, Brigham Young University, Provo, Utah, 1966.

QUESTIONS ON SELECTIONS*The Greatest Man in the World* by James Thurber

- (1-2-3) 1. In what ways did Jack Smurch qualify to be a hero? Is something beyond extraordinary deeds required before someone can become and remain a hero? If so, what?
- (1-2) 2. In what ways did Smurch qualify to be a hero? Why did the *Times* man deliberately misquote him? Be specific.
- (1-2-3) 3. What would have happened if Smurch had been permitted to participate in the "mounting orgies of glory" prepared for him?
- (1) 4. How is the title "The Greatest Man in the World" ironic?

Students will discuss the ideas from selections with each other, in small groups as desired. Students will discuss with the teacher the concepts to be found in the different selections.

Teaching Activities

The teacher and the laboratory assistant will serve as resource persons to any student needing help as they read through the selections. Organized teacher-led small-group discussions will be held as students reach certain checkpoints or complete a certain grouping of readings.

The teacher or laboratory assistant will read student's written responses and then analyze, grade, and prescribe related curriculum in composition and grammar as indicated.

Resources

The selections itemized in the student guide as basic reading can be obtained in the Instructional Materials Center and may be checked out anytime during the day. Related reading as listed is obtained at the library (a partial listing is indicated on the foregoing page).

Performance Measures

The student's written response to the questions and problems presented for each selection will be read, analyzed and evaluated by the teacher to see if the student has discovered the basic concept or related concepts.

The written response will also be analyzed for grammar, spelling and composition. Prescription of corrective curriculum materials will be made. Established tests will be used to determine effectiveness of learning based on prescription.

During teacher-led or student-led small group discussions, the teacher

ORDER RELATIONS

Filmstrip	"The Number Line"
<i>Programed Modern Algebra</i>	Do Pages 196-201
(Temac)	
<i>Modern Algebra</i>	Read Pages 1-10
Assignment #1	Pages 3-5, written exercises all multiples of 3
	Pages 6-7, all written exercises
	Pages 8-10, written exercises all multiples of 4

ORDER OF OPERATIONS

Tape lecture—#3	"Order of Operations."
<i>Number Sentences</i>	Programed Booklet—Do
	Pages 32-36
<i>Modern Algebra</i>	Read Pages 19-24
Assignment #2	Page 22 all odd
	Page 24 all multiples of 3

SETS

Filmstrip	"Language of Sets"
Taped lecture #3	"Sets—Infinite and Finite"
<i>Elementary Concepts of Sets</i> (Holt)	Booklet: Read Pages 1-20
Modern Algebra	Read Pages 10-16
Assignment #3	Page 12, problems 1-6
	Page 17, all even problems in written exercise

Check Point

At this point the chapter test and the chapter review on Page 28 of the text should be completed. Be sure and clear up any misunderstanding before Test One is taken.

Request permission to go to the testing room and take Test 1.

Teaching Activities

- 1) The teacher and the laboratory assistant will assist students individually at their carrels whenever they need help on a problem.
- 2) The teacher will call small groups of students together whenever a group of students or whenever the teacher decides there are students needing help in understanding a concept or process.
- 3) Teacher-made tapes are available on the concepts to augment the instruction of the teacher. These tapes may be checked out by the student as needed.
- 4) If needed, the total group of students will be called together for clarification of the concept or process.

Unit Behavioral Objectives**Part I—Unit I**

Upon completion of this unit the student should be able to:

1. Distinguish between a number and a numeral.
2. Define the following terms and symbols:

coefficient	replacement set
factor	base
prime numbers	exponent
composite number	power
set	solution set
subset	...
empty set	$=$ $<$ \neq $<$
finite set	$>$ $>$ $\{$ $\}$
infinite set	ϕ
variable	$\{ \}$
open sentence	

3. Graph order relations on a number line.
4. Properly simplify a numerical expression performing the operations in the proper order.
5. Properly group a numerical expression for simplification using parentheses, brackets and braces.
6. Operate on variables involving exponents.
7. Successfully and logically find the solution sets to simple, single variable, open sentences.
8. Distinguish between infinite and finite sets.
9. Represent a given composite number as a product of primes.
10. Evaluate a simple open sentence when given values for the variables.
11. List the members of a set either by the roster method or rule method.
12. By the use of venn diagrams, indicate the intersection or union of two sets.
13. When given two or more sets, identify the intersection or union by the rule or roster method.
14. Identify the symbols for multiplication.
15. Find the number of terms in an algebraic expression.

Teaching-Learning Activities and Related Resources**READING AND PROBLEM ASSIGNMENTS****SYMBOLIZATION**

Tape lecture— ≈ 1

Modern Mathematics—(SRA)

"Symbols, Numbers, Numerals"

Programed Chapter #1

"Numbers and Numerals"

All Frames

tions, but with the sudden demand for new and updated knowledge in texts, the small firms couldn't keep up with the requirements (the investment for an elementary social science series, for example, is more than \$1 million and seven years). These firms merged or were bought out by larger companies, but today the field could still be considered quite competitive with 200 educational publishers producing 15,000 titles a year.

In 1956 the federal government made a modest grant of \$303,000 to a Cambridge, Massachusetts, group interested in updating high school and college physics courses (now the Physical Science Study Committee). From this beginning, the government's investment in updating and distributing new curricula now totals \$100 million, and the new Education Act adds another \$100 million for quality improvement of course materials. This is a program which textbook publishers could never have financed on their own, and it has brought about not only improvement in texts but also a diversity never before known in the textbook industry.

Austin J. McCaffrey, executive director of the American Textbook Publishers Institute (ATPI), described the development before a workshop in Detroit: "I can assure you that all of our major publishers have in production textbooks which will reflect more fully the diverse elements which have contributed to the strength of America. There are elementary reading series, social studies books, multi-racial illustrations for all subject matter, books for the slow learner, readers for children to whom English is a second language. There will be books for the adult illiterate and those newly arrived in our country."

Most attention has been paid to the demand that the Negro be adequately reflected in textbooks, both historically and in illustrations. Because of the years that it takes to develop new texts, much of the current integration of texts has been with "interim" revisions—illustrations which include Negro children, or paperback supplements which cover integration, civil rights, or the role of the Negro in American history.

The Detroit public schools were among the first to develop integrated primers, and tests there show that the specially written primers stimulated interest in reading of both white and Negro children. Another first in the field is a reading series prepared by the Bank Street College of Education (New York City), which shows not only integrated neighborhoods, but also an urban setting—laundry on the fire escapes of old brownstone buildings. One textbook publisher is including writings by Negro authors, e.g., James Baldwin, and a new series for the junior high level describes the contributions of various minorities to American and world history.

The ATPI works closely with the Great Cities Improvement Program, where most of the demand for integrated texts appears. The New York City schools have special teacher and student materials about Puerto Ricans, and some publishers also are including Spanish-speaking elements in their integrated texts.

Performance Measures

Performance is measured by passing the Test 1 at an 85% level. The test is designed to measure understanding of the Language of Symbols of Algebra. Prior to taking Test 1, the student should review and clear up any misunderstandings after taking a sample test found in the text on page 27.

Individualizing Instruction

Individualizing Instruction is attained by providing each student with a self instructional study guide allowing students to progress through the curriculum at their own rate of speed, by providing multiple sources for learning the concept, and by allowing evaluation to take place individually as the student progresses through the program.

Diverse Textbooks Aid Programs

One great boon to the principal's desire to improve his curriculum is the recent diversity found in textbooks and related curricular materials. Not only are there more materials, but there are varying approaches to the same concepts with varying levels of difficulty represented. Both the quantity and diversity will be an asset for the innovating administrator. This diversity is reflected in the next article.

NEW TEXTBOOKS: DIVERSITY IS THEIR TITLE *

Of all the groups affected by the "revolution" in education none, perhaps, is more elated or more frustrated than textbook publishers. Not only are the Dick, Jane, and Spot standards for content on the way out, but so is the idea of a single textbook for each level, or even of dependence upon the textbook as a major resource.

In the late 1950's the textbook industry underwent major organizational revisions. Until then many of the firms were small, family-owned opera-

* FROM *The Shape of Education for 1965-66* by The Editors of Education, U.S.A., pp. 8-10. Copyright 1965 by The National School Public Relations Association. Reprinted by permission of The Association.

New Jersey Education Association. "The Big Change: Textbooks." *NJEA Review* 38:405-07; March 1965.

PRUGH, PETER H. "Textbook Firms Offer New Material To Train Adults and Teen-Agers." *Wall Street Journal*, March 2, 1965. p. 1.

MACDOUGALL, A. KENT. "School Texts Stressing Negroes' Role in U.S. Arouse the South's Ire." *Wall Street Journal*, March 24, 1965. pp. 1, 20.

The Instructional Materials Center

One startling fact that has come from most of the innovators who have made major changes in organization, curriculum and instruction is that the library program must make some major changes. The library is better referred to as the instructional materials center in these new programs. The IMC takes on new meaning due to greater utilization and expanded functions. The description that follows is about the IMC in the continuous progress school, but it is representative of the changes made for many innovative programs.

THE IMC IN THE CONTINUOUS PROGRESS SCHOOL *

June Berry

Many solutions have been found for the traditional problems of traditional schools: team teaching, programed instruction, the Trump Plan, the Diedrich Plan, and so on. Among these, the Continuous Progress Plan is one of the few which picture the instructional materials center as the center of the plan and of the school. It is based on the educational philosophy that the student should progress at his own rate from kindergarten through college, unhampered by a lock-step curriculum or by a teacher who must give the identical lesson to 35 students.

In the Continuous Progress Plan (CPP), barriers of grade and class organization for instructional purposes are completely eliminated. Each student advances as fast as his ability and interest dictate. One may go through the curriculum of a traditional grade in four months; another will need fourteen. The plan features individual study stations, or carrels, where the student keeps his books, progress charts, and other study equipment. When he needs help he consults the teacher and librarian; or he will be

* FROM *School Library Journal*, November, 1964, pp. 25-28. Reprinted by permission of the *School Library Journal* and the author.

Research in education has had as much of an impact upon textbooks as the curricular research that characterizes the reform of physics, chemistry, biology, and other sciences. It has brought about team teaching, ungraded primaries, an emphasis upon individual study, advanced placement programs, and the supplemental use of at least a half dozen new teaching media—e.g., programmed learning, electronic laboratories, 8mm film.

One publisher's paperback series for supplementary reading in college English has been adapted for advanced placement high school programs. An elementary reading series of another publisher gives the teachers one basic program, but a range of five years in supplementary materials at each grade level. A remedial series of books for teen-agers, written at the fourth-grade level primarily for the New York City schools, describes the experiences of a group of teen-agers in a big city:

"Together Pete and Joey slugged away at Hank until his nose was bleeding and one of his eyes was black-and-blue. . . ."

The author of the series, a former New York City high school teacher, commented when the books were published: "We don't want John and his puppy dog."

The new diversity of the textbook publishing industry shows itself in other ways—the multi-media materials which coordinate textbook, film-strip, tape recorders, or discs as one package for a unit of study; the wide open opportunities for publishing pre-school materials; and, at the other end, the development of special texts and supplementary materials for adult illiterates.

However, there is one diversity that a few textbook publishers, for their own economic necessity, have participated in despite the opposition of some educators and civil rights groups. In the South the state textbook selection committees have rejected, in several instances, the new integrated texts. Alabama and Virginia have rejected them; state officials in Georgia predicted in April 1965 that there might be some objection at the local level. For the same reason of economics, however, the old and nonintegrated texts may not have much of a future. As the market for them diminishes, it will be economically unfeasible to publish them and they will gradually be dropped.

REFERENCES

- MCCAFFREY, AUSTIN J. "The Treatment of Minority Groups in Textbooks." Address before the 16th annual Human Relations Workshop of the Detroit Public Schools, Waldenwoods, Mich., Oct. 2, 1964.
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facilities. The film or filmstrip may be taken home, as books are in conventional schools, and if the student doesn't happen to have a projector of his own he may obtain one at the IMC and check it out for home use.

Guidance in Finding Materials

In the CP plan the librarian spends less time finding information for students, because they have learned their study skills early. Since students spend 60 per cent of their time in individual study, they must be proficient in finding what they need in the IMC. In his elementary years (called "entrance" and "cultural" divisions) the student may not advance in the curriculum sequences unless he has mastered certain basic study skills. More intensified and specialized IMC instruction is given in the high school (or "pre-specialization division").

IMC instruction is given in two ways: When several students are ready for advanced card catalog experiences, their teacher will direct them for small group instruction from the librarian or his assistant, though the teacher may do it himself. Or an individual student may ask to go to the IMC for help from the librarian or through some self-instructional device: a study kit, programed text, or teaching machine, on finding and using materials.

Reading Guidance

Individual reading guidance follows the pattern of the traditional school. *There is as much variety in the reading levels of students as in their mastery of content.* Many students, however, do read more advanced books, since they are not being paced with slower learners. They come to the library for adult books and to participate in Great Books discussions with others on the same reading level.

IMC SERVICES TO TEACHERS

In the conventional school the librarian assists a teacher who must give one lesson to a class of 35; in the CP school the library personnel help a teacher who is in charge of 60 students, but who has perhaps no more than six studying the same lesson at once.

Compiling Bibliographies and Assembling Materials

The teacher will call on the IMC when she has one student or a cluster of students who need material on a given subject. A list of all the books, films, and other materials on the subject is compiled by the librarian and

called into "studios"—small groups of five or ten students who happen to need the same lecture or discussion at the same time. When the lesson is completed he returns to his carrel until he again needs help.

The instructional materials center is essential to the CP school because a wide variety of materials are needed by different students at different times and they must be kept in a convenient central location. Our IMC has virtually the same definition as that given in *AASL Standards for School Library Programs*, and it embodies almost every recommendation of the *Standards*. Indeed, it adds others, for it contains not only all the materials found in good school libraries, but the equipment and supplies offered in audio-visual centers, and the materials being used in the curriculum laboratories that are sprinkled across the nation. It also provides space and guidance for using these materials.

IMC SERVICES TO STUDENTS

Organization of Materials

The IMC selects, orders, catalogs, and organizes all materials for use by student and teacher. Anything aiding instruction is an instructional material and thus a service of the IMC. We have pictures, models, maps, charts, and study kits, numbered and filed in their designated areas; our community resource file lists people in the community who can serve as resource speakers on given subjects and indexes places that are suitable for field trips. All materials are listed in the card catalog and distinguished by color: a blue card may indicate films, yellow the study kits. Schools using this method would continue by adding colors for programed lessons, models, and exhibits.

Circulation of Materials

Circulation procedures resemble those of the traditional library, except that not only books and magazines may be checked out, but filmstrips and programed lessons, and even equipment for their use. Some a/v materials are booked in advance, as they are in a/v centers, so that students and teacher may know for what day and hour the materials are reserved for them.

Use of Materials

The IMC carrels or booths can be used by the student for reading purposes and for use of film or tape recordings. The student may also use one of the conference rooms which provide electrical outlets and soundproofing

depending on the size of the school and the teachers' needs, will be in charge of graphics and the construction of teaching materials.

Clerical and Student Assistants

To permit the librarian to engage in curriculum guidance, routine duties are shifted to one or more clerical assistants, who catalog books, films, and other materials in the IMC. Most schools will continue to use student assistants. Some students are selected because of their interest in careers in library work or "instructional technology"; others may be paid to work in the graphics department or other areas of the IMC.

IMC FACILITIES

Facilities, equipment and materials for CP schools are like those of good conventional schools, though with several obvious additions. First the traditional book storage area must be enlarged to house films, recordings, tapes, study kits, exhibits, models, transparencies, and the various self-instructional materials, and additional space provided for projectors, phonographs, teaching machines, and other a/v equipment. Special shelving must be designed to hold these various materials.

The conventional circulation areas must also be much larger, so that films and projectors may be checked out. Since these cumbersome objects may also create disturbance, the circulation area should be removed from the reading and study areas.

The reading area resembles that of any modern school library, except that fewer large tables are found, and more carrels. Various types of individual carrels and booths are scattered throughout the IMC, most equipped for use of films, filmstrips, and teaching machines.

Traditional conference rooms are modified only to add more complete listening and viewing facilities. In addition, a preview and planning area is added to the conventional library space. In small schools a large conference room may suffice.

An area considerably larger than the conventional workroom is necessary to accommodate the many supplies used in producing charts, maps, transparencies, and other instructional aids. It must have space and facilities for processing all books, films, and other materials to put into circulation, as well as space for mending books, and for repairing and maintaining a/v equipment. This area, known as the technical processes or graphic area, is also called the "curriculum lab" or teachers' workroom.

Special production studios and facilities are needed in schools where tapes, recording filmstrips, and/or TV programs are produced. In schools where tapes are electrically transmitted to the individual carrels, a central control area will be necessary, preferably in or near the IMC.

sent to the teacher. Often the materials themselves are gathered when the teachers request them. They may be placed on reserve for his students; or films, books, pictures, models, and exhibits are collected, checked out, and sent to the studios for the length of time they are needed, ranging from a day to a month. Because of the diversity of our collection, even bulletin board ideas and materials are available to teachers. Book jackets, charts, pictures, letters, and other objects are checked out as often as are books in a conventional school.

Preparing Teaching Materials

If the library does not contain the materials needed by the teacher, one of the IMC personnel will help him make it, or may make it for him with the help of student assistants. Pictures are enlarged on the opaque projector; transparencies are made for overhead projection; models are built; and collections of various types are assembled. The IMC includes a technical process department, often with a full-time person in charge of graphics and production of teaching aids. All materials are there: cardboard, construction paper, scissors, paper cutter, paints, all the table and counter space necessary.

Planning with Teachers

Planning takes up a large portion of time. Sometimes only a few minutes are needed to find a picture or map. More often the librarian or a/v specialist visits a studio to discuss the materials needed by a group of students and their teacher. In addition, monthly meetings are held with the various departments to discuss the needed materials. Often the librarian or a/v specialist joins the teacher in previewing a film for prospective purchase.

IMC PERSONNEL

Obviously a range of activities geared to helping all teachers and all students with their individual needs requires a larger library and a/v staff. Here the AASL *Standards* must be considered minimal; though the exact size depends on the size of the school.

Professional Staff

At least one person trained in traditional library procedures will be responsible for services involving printed materials; another, the audio-visual director or supervisor, will supervise the selection and organization of films, projectors, tapes, and teaching machines. A full- or part-time staff member,

depending on the size of the school and the teachers' needs, will be in charge of graphics and the construction of teaching materials.

Clerical and Student Assistants

To permit the librarian to engage in curriculum guidance, routine duties are shifted to one or more clerical assistants, who catalog books, films, and other materials in the IMC. Most schools will continue to use student assistants. Some students are selected because of their interest in careers in library work or "instructional technology"; others may be paid to work in the graphics department or other areas of the IMC.

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The reading area resembles that of any modern school library, except that fewer large tables are found, and more carrels. Various types of individual carrels and booths are scattered throughout the IMC, most equipped for use of films, filmstrips, and teaching machines.

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An area considerably larger than the conventional workroom is necessary to accommodate the many supplies used in producing charts, maps, transparencies, and other instructional aids. It must have space and facilities for processing all books, films, and other materials to put into circulation, as well as space for mending books, and for repairing and maintaining a/v equipment. This area, known as the technical processes or graphic area, is also called the "curriculum lab" or teachers' workroom.

Special production studios and facilities are needed in schools where tapes, recording filmstrips, and/or TV programs are produced. In schools where tapes are electrically transmitted to the individual carrels, a central control area will be necessary, preferably in or near the IMC.

The librarian and a/v specialist each need an office for planning, consulting, and ordering materials. If there is a director of the entire IMC, he will also require an office.

CONCLUSION

Despite the financial problems involved in building, furnishing and staffing the Continuous Progress School, there are corresponding savings in human resources. Not only are thousands of hours saved by the bright students who now sit for hour after hour while teachers concentrate on the "middle spread," but there are fewer frustrations, behavior problems and dropouts among the slow learners who try unsuccessfully to compete with their age peers. The slow learner who needs more "experiences" can pace and duplicate his own instruction, while the gifted student uses the time to learn more about his special interests.

The library has always served individuals far more than groups. In this plan, the IMC does on a grander scale all the services which forward-looking librarians have been doing feebly without personnel and facilities. Librarians have the opportunity to use their training and skills for professional purposes—helping students with their individual needs, and helping teachers assist students in progressing at their own rate.

Programs for the Dropout

Secondary school administrators have long been aware of the dropout problem discussed in previous selections. Ways to solve the problem have been more illusive. However, in recent years intensive and creative programs have been developed. The following selection presents ten tested and proved programs from a single school district for preventing and salvaging dropouts.

TEN PROVEN PROGRAMS TO PREVENT DROPOUTS *

There are more ways than one to teach foreign languages, to teach reading, to maintain school buildings and to administer the professional growth of teachers. Most districts use many.

There are more ways than one to reach, salvage, teach and, most im-

* FROM *School Management*, October, 1965, pp. 70-74, 126, 128. Reprinted by permission of *School Management*, copyright 1966 by Management Magazines, Inc.

portant, prevent dropouts. If you aren't utilizing a group of them you should be. No one program can meet the needs of all your potential dropouts, no matter how good it appears to be.

Can't afford it? Haven't got the manpower, the resources or the administrative know-how? How can any school system be expected to divert more than a fraction of its efforts toward just one of its many problems?

This report tells how one medium-sized district (8,400 pupils) in middle-sized Ithaca, N.Y. (population 25,000) focuses 10 different programs on its dropouts and potential dropouts.

There is little that is "new" or earth shattering about Ithaca's programs, aside from the fact that there are 10 of them. They are significant only because:

1. They work. They have cut Ithaca's dropout rate by 25% in the last three years.
2. They can be implemented—all 10 of them— by virtually any school district, by itself or in concert with others. Ithaca has been able to design, implement and sustain all 10 of its programs by identifying and exploiting every available resource—human, government, economic. These same resources are available to you.
3. All 10 programs can conceivably qualify for substantial financial support from the federal government as well as from your state.

If the dropout problem is something you and your community are learning to live with because you don't know what else you can do about it, the following rundown of Ithaca's programs should change your mind.

I SCHOOL-TO-EMPLOYMENT PROGRAM (STEP)

What: A work-study program designed to prepare students for full-time employment if and when they leave school, and to keep students in school until they graduate.

Who: Enrollment is limited to 15-year old boys who have been identified as probable school dropouts.

How It Works

This is an "intensive care" program. Students who appear to be definitely on their way out of school are systematically selected by a cadre of counselors, the school social worker and other specialists. The boys (a maximum of 15) participate in STEP for one year, during which time all of the auxiliary services of the school are concentrated on them.

Hopefully, at the end of the year, the school will know enough about the students to give them what they need in terms of curriculum and the students' interest in school will be sufficiently revived to hold them until they graduate. If not, the youngsters are at least prepared to leave school, find employment and keep it.

Students spend half the school day attending classes and the other half working on a job. A teacher-coordinator meets with the group daily and works closely with each student, attempting to define individual problems and to help develop attitudes, habits and skills that overcome them.

Each youngster is assigned to regular school subjects in the specific areas of his strongest *interests*. "This may not be strictly according to the book," says Pupil Personnel Director Samuel Catalfano, "but we don't want boys taking history and English if these courses will drive them out of school. What we want at this stage is to get them interested in school—to find out that school *can* be interesting and satisfying. Then, after they've come to see school in this new light, they can take 'required' courses."

STEP students are placed in jobs with government agencies, for the most part—hospitals, schools, the public library, various city departments, etc. Last year, one student worked as a mechanic in the city garage. Another was a clerk at city hall. A third put away books and checked cards at the library. Another was a draftsman in the city water department.

The students are *paid* for their work—by the school district—at a rate slightly lower than that of other employees performing similar tasks.

At their work stations, students are closely supervised by their immediate supervisor on the job and also by the teacher-coordinator.

In a very real sense, the coordinator is the key to the whole program. He must know each student well. If he feels the student needs psychological help, a home visit by the school social worker, special work by one of the student's teachers, or special training by an employer, he makes appropriate recommendations and sees that they're carried out. He is responsible for persuading employers to participate in the program and is presently making a concerted drive to involve private businesses and industries. He must place each student in a job that matches his aptitudes and abilities and one that *really* teaches the youngsters something. Along with guidance people, he also plays a hand in deciding which courses each student must take in school.

Results

In terms of placing students in jobs, STEP is a flop. Thirteen of last year's 15 participants—all of them almost certain dropouts—have returned to school full time and expect to graduate. If they do leave school, however, the program will make the transition to the world of work far easier.

"In a sense, you can't lose," says Catalfano. "This is a school-to-employ-

ment program but the boys aren't staying in employment; they're coming back to school. Those few who do stay on the job, on the other hand, have learned something. They're in far better shape than they would be out on the streets with no skills."

Cost

Approximately \$11,500 pays the salary of the teacher coordinator, student wages, auxiliary service fees and other expenses for one year. New York State reimburses the district for one half of the expenses incurred. After five years, the district may assume the full burden. However, it is anticipated that, by then, private businesses will be employing the students—and paying their wages.

2 DISTRIBUTIVE EDUCATION

What: A work experience program in the field of retailing.

Who: Students who have taken a basic course in retailing, show a definite interest in working in stores and dealing with customers and might quit school before graduation to get a job.

How It Works

This program closely resembles STEP in organization but differs sharply in the type of student who participates and the type of program offered. Students are less vulnerable to dropping out of school impulsively, but many itch to get a job that will enable them to buy the things they want now. Consequently, the program is oriented to long-range vocational aims, rather than to immediate intensive care. It gives students a chance to earn money while they work toward those goals.

A teacher-coordinator conducts distributive education courses and places students in outside jobs. Students, while they do elect the program, are carefully screened. "We have to be careful," says Phil Lewin, coordinator of guidance for the district. "The program depends on the cooperation of local businessmen. If you get just one or two ringers in their stores, it could scuttle the whole ship."

The coordinator "recruits" businessmen to participate in the program, carefully matches students with employers and maintains close contact with the employers. The employer must agree that he will actually supervise the youngster and teach him, rather than just give him odd jobs.

Each student works about 600 hours during the school year, is paid by his employer at the "going rate," and earns one unit of school credit. All

this, of course, is in addition to the advanced distributive education course that the student takes in concert with his job, as well as the other courses he needs for his (or her) diploma.

"This program is a natural for most districts," says Lewin. "Many high schools have a large number of students who work part time. Teen-agers today have pretty elegant tastes and they need to work to satisfy them. They're also champing at the bit to be 'on their own.' The danger is that they'll quit school prematurely.

"When the school makes it possible for them to work, when it even finds jobs for them—and when it teaches them how to do their jobs better—they're going to stick around until they graduate."

Results

Of the 50 students who have participated in the distributive education program during the past two years, all have stayed in school. Most graduates have jobs waiting for them or have such solid backgrounds in retailing that finding a job—anywhere, not just in Ithaca—poses no serious problem.

A real problem, from the school's point of view, is the fact that students who graduate fill most of the jobs that the program utilizes. This means that the coordinator must turn up a new batch of jobs annually. However, maintaining close contact with the distributive education committee of the local chamber of commerce (formed at the behest of the schools to help with the program) minimizes this problem.

Cost

Since employers pay the students' wages, the schools pay only the coordinator's salary and expenses: less than \$10,000.

3 NEIGHBORHOOD YOUTH CORPS (NYC)

What: A job placement program, with or without school attendance.

Who: Young people between the ages of 16 and 21 who have dropped out of school, probably will drop out, must work in order to remain in school or have graduated but can't find employment.

How It Works

NYC, conducted under the provisions of the Economic Opportunity Act, is operated jointly by the Ithaca schools and the state employment office.

The employment office recruits out-of-school applicants—dropouts or unemployed graduates—and provides testing, counseling and job referral

services for them. The school district provides similar services for students—probable dropouts and youngsters from poor families who must work. Responsibility is divided in this way primarily for reasons of protocol and communication. Both the employment office and the schools must keep informed about each participant in the program because, in practice, they are likely to share their services with most participants.

"Obviously, we're in a better position to work with students who are in school," says Catalfano, "and the employment people are in closer contact with those who have left us. But if we're unable to place a student in a job, the employment office can usually help us, and sometimes it works the other way around. By the same token, the employment people are sometimes unable to provide all of the counseling an individual needs, and, here, we can step in."

For dropouts and unemployed graduates, the program functions as a job placement agency, with heavy emphasis on counseling. Some of the job opportunities uncovered include teachers' assistants, hospital floor workers, maintenance workers, clerks, furniture finishers and trainees in more highly skilled positions (as mechanics, painters and in other trades). Persons placed in this way work 32 hours a week and are paid \$1.25 an hour to start.

Here again, individuals are placed in jobs with the understanding that they will receive special supervision and training; the NYC coordinator keeps in close touch with employers.

The full counseling resources of the employment office and the schools are focused on participants. Counseling is primarily problem related. "An employer will call the NYC coordinator and ask him to talk to a young person about his attitude, or the way he dresses, or personal hygiene," says Lewin. "This is something counselors who do not have daily contact with the person can handle better than the employer, partly to avoid resentment, partly because counselors are trained to do this."

For participants who are still in school, the program is essentially another form of work-study. Students are limited to 15 hours of work per week during the school year, more during the summer when the program continues. They're paid at the same rate, \$1.25 per hour. They receive heavy counseling to help them adjust to their jobs—and to school—and also to help the schools meet their needs in terms of curriculum. In other words, where counseling for nonstudent participants is almost entirely job related, counseling for students is programmed on a more personal basis. The object, obviously, is to keep the borderline cases from throwing in the towel.

Results

Last year, the program's first, 83 young people participated. Of these, 63 were students and nearly all (except those who graduated) were back

in school this fall. Most are either in NYC for another year or have moved into one of the district's other programs. This year, nearly 100 students are participating.

The greatest indication of NYC's success may be the fact that 10 of the participating dropouts have decided to get more education. "If we get the slightest indication in counseling dropouts that they would consider coming back," says Catalfano, "we encourage them. We don't push it; we don't want to 'scare them off.' But we do open the door."

Says Lewin: "A student doesn't necessarily have to come back and graduate. If he isn't interested in anything except drafting, fine. But we tell him that he can benefit by at least learning this trade in school. We hope that he will get into adult education or one of our other projects."

Cost

The total cost of NYC is \$170,000. The federal government provides \$152,000; the state provides the services of the employment agency; the school district supplies \$18,000, most of it in services.

4 EVENING EXTENSION SCHOOL

What: Correspondence courses offered at the high school in the evening under the supervision of qualified teachers and guidance personnel.

Who: Dropouts of any age who want to complete requirements for a high school diploma.

How It Works

When this program was started last October, all known dropouts in Ithaca were contacted by telephone, through social agencies and by placing ads in the newspaper. Thirty-five persons responded to this enticement by enrolling. Here's why:

Evening hours allow the students to pursue normal daytime employment or activities.

Correspondence courses—paid for by the district—offer a far wider range of subjects than the typical evening school program.

Four teachers were assigned to the program, plus the part-time services of the coordinator, a guidance counselor, a school psychologist, a remedial reading teacher, and a social worker.

Remedial reading instruction and intensive individual and group counseling are an integral part of the project.

Classes meet two hours a night for four nights. This gives teachers and guidance people ample time to work with each individual. Teachers supervise students' work, provide special tutoring and meet regularly with the auxiliary specialists to discuss the students.

The services of a clerk are available every evening. Complete records have been developed, including a permanent record, transcripts, test records, anecdotal reports, and so on.

In this program, as in all of the others, extremely heavy emphasis is placed on guidance. The guidance office is open all four nights of the program to help the students (and, for that matter, any other adult or youth in the community who needs help).

"As it has turned out, we're actually serving three distinctly different groups of people," says Lewin. "One consists mainly of women who aren't too far away from a diploma and who really push to get it. They're anywhere from 17 to 45 years old. This is a highly motivated group and they work pretty well by themselves without too much attention.

"The second group consists mainly of recent dropouts, young people with serious reading and emotional problems. You can't just hand these people a correspondence course. Reading is their big problem but you never know which comes first—the reading problems or the emotional problems. It really doesn't make much difference so we tackle it from both ends at once, and use our reading specialist extensively along with our guidance people."

The third group comprises students who can't benefit from the program in terms of getting a high school diploma. Some can't even pass their correspondence course. But the program is meeting their needs, just the same.

"We have several youngsters who come in faithfully and they are making progress—not much, but some," says Catalfano.

For these students, and for many in the second group of young dropouts, the program's stress is on verbal and mathematical skills. A math teacher is present every night. With some of the students, she simply tries to help them learn the multiplication tables. At the other end of the scale is a housewife who is taking a tough programed course in intermediate algebra. Hopefully, some day she'll go on to college.

"The wonderful thing about a correspondence program like this," says Catalfano, "is its flexibility. Any curriculum is available—all you have to do is send for it—and we supply a hard-nosed staff to go in, define individual problems and begin to solve them."

Results

Of the 27 participants who finished up the program last year, three have high school diplomas today. Others are continuing in the program this year; a total of 30 students is enrolled. The outlook for the future is good.

"Not everyone is going to get that sheepskin," says Catalfano, "but many people will when they realize they have the opportunity. And we're making real progress when we can help others, too—help them read, or learn basic numbers skills, or conquer some of their emotional problems."

Cost

\$9,500 for courses and salaries.

5 TERMINAL COUNSELING PROGRAM

What: One guidance counselor specializes in the problems of the terminal student and works only with those students.

How It Works

Rather than have each of the district's guidance counselors work with a preponderance of college-bound students and only a few terminal students, the terminal students (350 of them) are all assigned to one man. "We think it makes sense to enable one man to really get his teeth into the special problems of these students," says Lewin.

Pressure for instituting this innovation came from the community at large. Terminal students now receive intensive, knowledgeable guidance on occupations and vocational planning. They are regularly taken on field trips to businesses and industries to acquaint them with employment opportunities. Visits to technical schools are arranged for those who develop an interest in continuing their education beyond high school. The terminal counselor maintains close contact with representatives of the military services and with the state employment service and local employers.

As would be expected, he also works very closely with coordinators of the district's other antidropout programs and functions as the chief liaison between these specialists and classroom teachers.

Results

Vastly improved counseling for nonacademic students. "This man has a background of working with these students as a teacher," says Lewin, "and he has an abiding interest in their problems. Previously, the counseling they received was cursory and uninformed. It wasn't anyone's fault; it was just that the big push was on our college prep youngsters. Now, the others have the ear and the brain of a specialist."

Cost

Nothing. The district has not added to its guidance staff.

6 VOCATIONAL EDUCATION

What: A brand new, technical training program, geared specifically to meet the needs and interests of terminal students.

Who: 65 boys and girls identified as probable dropouts.

How It Works

Courses offered include printing, electronics, auto mechanics, drafting, food services, cosmetology and (through an exchange program with a neighboring district) landscaping.

Students take their technical courses in a single time block (i.e., from 9:00 a.m. to noon) and their required academic courses in another time block. This makes it possible to release them from their last scheduled period to work on a job. (Twenty-five percent of the district's seniors have part-time jobs.)

Implemented last year, the course has been developed to provide marketable skills that students *know* they can use to get jobs. This knowledge, plus the fact that students can hold part-time jobs—plus heavy counseling emphasis on the importance of a diploma—keeps them in school.

Results

The program has not been in effect long enough to draw any statistical conclusions on its holding power. However, there is no doubt in Catalfano's mind about its effectiveness. "If you could see the students who take these courses," he says, "even if you didn't know anything about their background, you could spot them as potential dropouts. And if you could see them working around cars or in the electricity shop, you would know that the interest they're showing is the first spark that has been struck in them by anything connected with school."

Vocationally, the program's success is assured. It supplants a traditional industrial arts program that was frustrating students and local employers because the skills it taught were either obsolete or too basic. The present program meets the expressed manpower needs of the Ithaca area—without being so provincial as to force a student to stay in the area.

Cost

This is the most expensive of the Ithaca dropout programs and, for that matter, of *any* of the district's programs. The initial investment was \$75,000, with another \$112,000 added this year. But this was, in effect, the cost to

institute an entire vocational education program and some of the expenditures have been offset by state and federal funds. Expenses will fall off sharply in the next few years.

T CAREER FAIR

What: A two-day introduction to the workaday world—speeches, interviews, exhibits—emphasizing nonprofessional occupations.

Who: All junior and senior high school students, but particularly non-academic students and their parents.

How It Works

The fair, beginning on Friday night and ending Saturday night, consists of two parts. The first is an "exhibit hall"—more than 50 displays set up in the high school gymnasium by various companies, industries, trade unions, businesses, state and local government agencies (hospitals, police, health, fire department, etc.), military services and others to demonstrate various job opportunities and what they entail.

The second part of the career fair is a series of speeches delivered by some 60 individuals who discuss various occupations in terms of duties, desirable and undesirable features, personal and educational requirements, current employment prospects and future outlook, employment and advancement procedures. Each student—with his parents—has an opportunity to hear two speakers of his choice and to question that speaker after the formal presentation.

The project is organized by the district guidance department but it's really a communitywide and, in some respects, a statewide effort. People come from public and private agencies and enterprises located throughout New York to set up displays and talk with students.

A special effort is made to keep the program as nonacademic as possible. Requesting help from business and industrial firms, the district asks them to send laboratory technicians, rather than chemists; hospital orderlies, rather than administrators; assembly-line people rather than top management executives; mechanics, rather than proprietors. While the professions are represented to some extent, the interests of terminal students—determined beforehand by a preliminary survey—are the overriding consideration.

"It's getting more and more difficult for terminal youngsters to sit back and decide what to do for a living and to make that decision on an informed basis," says Catalfano. "It's extremely important that youngsters have a chance to survey vocational opportunities and to come in contact with

people who work at particular jobs, and ask them questions. The career fair gives them this opportunity."

Results

The first career fair was held last year and there was a mass turnout of students and parents. Their response to the project, both during and after it, was enthusiastic. About 99% of the students want the program repeated.

One drawback: The amount of time and effort involved in planning and implementing the program is tremendous. Because of this, it is to be held only every three years, *corresponding to the cycle of students entering and leaving high schools.*

Cost

Approximately \$500, excluding salaries of organizers.

8 TUTORIAL PROGRAM

What: Volunteer college students provide individual tutoring.

Who: Students who need effective remedial instruction in basic skills and who are likely to leave school.

How It Works

Tutors (college students) and pupils are matched by a screening committee composed of Cornell University students, Ithaca personnel and interested citizens. Ordinarily, tutors meet with "their" pupils in the school building after school hours. How often they meet depends largely on the availability of the tutor. Sometimes, it's possible to arrange meetings during the school day and, in a few cases, tutors go to the students' homes.

What's taught? This depends on the students' needs—usually basic reading, writing or computation skills; sometimes, more esoteric subjects: history, literature, social studies, etc.

Results

More than 100 students received "individualized instruction" through the tutor program last year.

"Many students have made remarkable progress," says Lewin. "Others aren't going to make much progress, no matter what you do for them. Sometimes just having someone sit and talk to these students is a big help."

But there's no doubt that the program as a whole is having a marked effect on the attitudes students have toward school and learning. They know they count for something; they know the schools really care about their problems."

One indication of the program's success is the fact that, until last year, it operated for three years at the junior and senior high school level only. Last year, it was extended into the elementary schools as well. Now, many elementary principals, who were openly skeptical, are firm believers.

The program is branching out, too. Interested women in the community, as well as increasing numbers of college students, are getting involved as active participants.

Cost

This program costs the district absolutely nothing.

9 REMEDIAL SUMMER SCHOOL

What: Two summer programs designed to solve the dropout problem early by helping youngsters overcome deficiencies in reading and mathematics.

Who: Elementary and junior high school students.

How It Works

For seven years, two separate summer programs have been operated for elementary and junior high school students in arithmetic and reading. This past summer, the reading program attracted 105 pupils from grades four through six and 77 youngsters from grades seven and eight. Arithmetic programs were attended by 171 pupils in grades four through six and 141 from junior high.

Classes are kept small—no larger than 15 students—to give youngsters the individual attention they need. Guidance people work closely with teachers and a variety of materials and equipment are available to them.

Results

Problems in reading account for more dropouts than any other factor, according to Catalfano. "We know this from our testing; when a sophomore scores 130 on a nonverbal test and an 80 on a verbal test you can almost count on having that student drop out of school before he graduates because of reading difficulties. In our summer program, we're catching this

type of problem before it goes too far. Most students show a marked improvement; some regress a little after school starts, and they're back again the next summer. But the over-all improvement is there."

Cost

\$2,000.

10 HIGH SCHOOL EQUIVALENCY EXAMINATION

What: Special instruction to prepare dropouts for a state-administered high school equivalency examination.

Who: Dropouts between the ages of 17 and 40 who want the equivalent of a high school diploma without completing the formal requirements.

How It Works

This program is, in effect, a "cram course." In order to do well on the equivalency examination, students must review and master the basic skills emphasized in the exam: mathematics, reading and vocabulary.

"Most of these people have mastered the basic skills to the extent that they can get along well enough in life," says Catalfano, "but they aren't ready to tackle the variety of problems contained in the examination."

About 35 people enroll in the six-month program each year. All need too many formal credits to earn a regular high school diploma.

Results

The program has been a regular offering of the adult education department for almost 20 years. During that time, it has opened up an avenue to better jobs and further education for hundreds of dropouts. The certificate that participants receive upon passing the equivalency examination enables them to qualify for further trade and technical school training, civil service positions and other jobs.

Cost

Approximately \$700 for the teacher's salary, work books and their expenses.

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The Changing Instructional Approaches

Programs and New Practices

The most exciting changes for teachers and frequently for administrators is in the area of methodology and instructional approaches to learning. Programed learning, critical inquiry techniques, individualized instruction, team teaching, and small group instruction with their related components are among the many new innovative approaches.

Extent of NASSP-Sponsored Programs

The staff utilization studies described earlier encouraged many innovative practices among which were large group instruction, team teaching, use of instructional assistants, independent study, and use of electronic and mechanical equipment. The following study by Kenneth W. Reber found the extent to which these practices were continued and were adopted by other schools. Schools that were involved in the National Association of Secondary-School Principals projects retained the innovations, whereas other schools have been slow to adopt the practices.

FROM PERSISTENT TENDENCIES OF THE NASSP-SPONSORED INNOVATIONS IN INSTRUCTION *

Kenneth W. Reber

The initial experimental studies grew out of a conference attended by members of the NASSP Curriculum Planning and Development Committee, representatives from the Fund for the Advancement of Education, and public school officials interested in finding solutions to the problem of the teacher shortage.

Subsequently, all secondary schools were invited to submit proposals for experimental study. The proposals were expected to conform to criteria established by the NASSP Commission which had been appointed to administer the staff utilization project. The proposals were expected to demonstrate through their implementation a better utilization of professional staff.

Most of the projects that were approved involved elements of the greater use of mechanical or electronic equipment, team teaching, the use of various kinds of non-certificated instructional aides, and organizational patterns calling for large group instruction, small group discussion, and increased independent study time.

Once an experimental study was approved by the NASSP Commission and financial support had been secured from the Fund for the Advancement of Education, supervision, control, and evaluation were left almost entirely to the local school system. The Commission suggested evaluation procedures which should be used.

The NASSP Commission made extensive efforts to publicize its concepts on better utilization of staff, descriptions of the experimental studies being carried out, and the results. The Commission was anxious that schools throughout the country develop experimental innovations in better utilization of staff.

Proposals submitted to the NASSP Commission were to include an estimate of the additional costs of conducting the proposed experimental project. The actual amount each school system received was decided upon by the NASSP Commission with approval from the Fund for the Advancement of Education. Respondents to the open-end questionnaire indicated that the grants-in-aid took care of about half the additional expenses of

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conducting the studies. The answers ranged, however, from one hundred per cent to ten per cent. The majority of answers indicate that school officials would request larger amounts of financial aid if they were to conduct future studies under similar conditions. Many of the school systems underestimated the additional costs which would be involved.

A review of the literature reveals that there is concern over the influence of private foundations in American society, particularly because of their wealth, their tax-exempt status, their support of agencies which compete with free enterprise, their support of programs dealing with controversial issues, and the nature of some of the research they sponsor.

The Ford Foundation, which partly absorbed the Fund for the Advancement of Education into its administrative structure while the NASSP staff utilization studies were in progress, is by far the largest private foundation in the United States. The Foundation continued support of the staff utilization studies.

Some professional education associations, colleges, and universities have developed guidelines, policies, and procedures for carrying on foundation-supported research. In general, these same organizations find much that is good in foundation-supported research and recommend that it continue.

It does not appear from this study that the sponsoring agencies, the Fund for the Advancement of Education, the Ford Foundation, and the National Association of Secondary-School Principals, exerted more than a normal influence on the various schools' experimental projects.

A representative of the Fund for the Advancement of Education and later of the Ford Foundation attended the meetings of the NASSP Commission, providing a liaison between the agencies and helping to avoid approval of projects already being sponsored by the Foundation in some other setting.

Sixteen of seventeen respondents from the staff utilization schools indicated that their school system would be willing to engage in a similar project again under similar conditions. There was no major criticism of the NASSP Commission or of the Foundations. Several respondents did note that the project would have to be one which was of interest and concern to their school system.

There is much professional interest in the relationships which should exist between educational institutions and private foundations in foundation-supported research projects. One of the better publications relating to the public school level is the American Association of School Administrators' *Private Philanthropy and Public Purposes*.

Respondents from twenty-four staff utilization school systems indicate that twenty-eight out of thirty-five staff utilization projects are continuing in like or similar form and that seven have been terminated. Some of the projects involve multiple innovations. Many of the respondents report some expansion of the innovations in terms of utilization by teachers and schools.

The projects which have been terminated form no particular pattern. Of those that continue, eleven are in team teaching, seven in the specific use of mechanical or electronic equipment, seven in the use of lay assistants, and three in organizational forms which permit more independent study time for students.

Sixty-one innovative practices were identified from the literature as having been a part of the staff utilization studies in the various school systems. The survey reveals that seventeen staff utilization schools are still using more than twice as many of these innovations, on the average, than thirty-four other school systems with which they were compared.

The average number of the sixty-one innovative practices in the staff utilization schools is 15.41 with a median of thirteen. The average number of the same innovations in the schools used for comparative purposes was 6.47 with a median of 5.5.

The staff utilization schools checked fifty-four of the innovations on the checklist at least once. The non-staff utilization schools checked forty-six of the innovations at least once.

The staff utilization schools checked fifty-one of the innovations more often than the non-staff utilization schools. The non-staff utilization schools checked five innovations more often than did the staff utilization schools.

Based on a limited sample of ten staff utilization schools and twenty-eight other schools, twenty-eight per cent of the innovations checked by the staff utilization schools and forty per cent of the innovations checked by the other schools are established forms of organization throughout the school systems. Forty-eight per cent and forty-five per cent respectively are established forms in some schools but not all within the school system, and twenty-four per cent and fifteen per cent respectively are still in experimental or pilot stages.

Many of the innovative practices combine the expanded or more intensive use of mechanical and electronic equipment, team teaching, the use of clerical or instructional aides, large and small group instruction, and increased independent study time. When the innovations are categorized in terms of major point of emphasis, no particular patterns emerge. Both the staff utilization schools and the other schools surveyed are employing all of these to some degree in the instructional process.

The greatest differences between the two sets of school systems occur in innovations related to team teaching and those related to more independent study time for students. The staff utilization schools surpass the other schools nearly four to one in the use of innovations in these two categories as contrasted with roughly two to one in the other categories.

The most popular innovations among the two sets of school systems consist of the use of language laboratories, the use of tape recordings in short-hand classes, the use of lay assistants in school libraries, the assignment of office practice students as clerical aides to various teachers, and a group

guidance program consisting of tape recordings, counselor-developed convocations, and selected homeroom activities. The non-staff utilization schools, particularly, showed a high use of the Science Research Associates Developmental Reading Kit in the teaching of remedial reading. Based on this survey, the language laboratory is an established form of organization in nearly all of the two sets of school systems.

Of fourteen items in the checklist relating to team teaching, the staff utilization schools checked these items forty-four times and the other schools a total of twenty-six times. This indicates that team teaching is a relatively popular innovation among the schools surveyed in this study.

The use of lay assistants in school libraries and the use of lay readers in English classes are both popular innovations in the two sets of school systems.

According to the respondents from the staff utilization schools, the most important side effects of participation in the staff utilization project were a greater awareness on the part of staff of the values in experimentation and a greater willingness to experiment, the development of new administrative patterns or organizational forms, and a greater use of mechanical and electronic equipment in the instructional process.

On the basis of reports from the staff utilization schools, most of the schools failed to anticipate the actual increased costs of experimentation.

Based on an analysis of the reports of the various staff utilization schools, it is obvious that many of the schools experienced some difficulty in developing and carrying through evaluation procedures which would produce reliable evidence of the results of experimentation.

In those cases where colleges or universities were asked to aid in the evaluations, more reliable evidence of outcomes was usually presented.

Most of the reports carried some information regarding the reactions of staff, students, and others to the innovative practices. In some cases, the human reaction appeared to carry more weight than the statistical evidence of student achievement or of better utilization of staff.

Although there was some advance notice that the NASSP project was to be terminated and that grants-in-aid would be discontinued, the termination placed some hardships on participating schools, particularly those whose experimental projects were only a year or two old or where plans for expansion of the project had been made.

In summary, then, this study shows that the NASSP staff utilization project was effective in promoting change in public education, that a national agency such as the NASSP in cooperation with local school systems and with private foundations provides an appropriate vehicle for the improvement of education, and that innovations in instruction introduced into voluntary school systems as a result of participation in a broad and carefully-organized project do continue to exist in the participating schools

long after the over-all project is terminated. The NASSP staff utilization project was planned and was carried through long before the federal legislation which currently will make massive innovation possible in school systems across the nation. There is little doubt but that in many ways the NASSP project might well be called the forerunner of new and important things that are happening in secondary school education.

Small-Group Instruction and Learning

Allan A. Glatthorn states in the next article that small group instruction is best for uncovering a course whereas large group instruction is for covering a course. The effective use of small groups can best be determined by asking the question, "What can I do with a group of ten that I cannot do as effectively with a larger group?" Glatthorn identifies and effectively discusses the following groups: task, didactic, tutorial, discursive, brainstorming, heuristic, and maieutic.

LEARNING IN THE SMALL GROUP *

Allan A. Glatthorn

Let me begin by stating flatly that the small group is one of the most important educational innovations to be discussed at this conference. We could survive without the large group. We could manage without the complexities of the flexible schedule. But without the small group we would inevitably fail in our educational task. The reason is simple: it is only through the small group that we can multiply the opportunities for pupil-teacher interaction. And very significant kinds of learning take place only through such interaction.

This interaction becomes of prime importance for the student. He learns best when he is involved actively in the learning process, and the small group most effectively provides for such involvement. In the small group the student is seen as the individual learner—he cannot be ignored, he cannot get lost as a passive listener. The shy student finds himself more at ease and gradually begins to speak up and opens up to the few who are with him. The talkative student who enjoys impressing a large class feels a bit different

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when five or six are sitting with him in the quiet of a seminar room, and he begins to listen. And the students are perceptive of the value of the small group. Most surveys of student opinion reveal overwhelming approval of the small group as a learning environment.

The teacher also benefits in very obvious ways. He finds himself functioning in a different kind of role—because the setting demands such a change. We have frequently heard the educational platitude that “changing a schedule won’t change the teacher.” Don’t believe it. We have found that *scheduling the teacher for a small group does change teacher behavior*. Even the most dogmatic and didactically oriented teacher finds that he just can’t lecture to five or six students. Our experience has been that once teachers have been successfully introduced to small group, they want more and more time for it.

These benefits for the students and the teacher apply in all subjects. It is a mistake to think that small groups are useful only in English and social studies: they have proved to be effective in mathematics, science, and foreign language. Incidentally, we have found small groups very effective as a way of working with problem students in guidance oriented seminars. Use this as a general maxim: if you can teach it in a group of 27, you can teach it better in a group of 10.

Given its basic importance, how do we schedule for the small group? There are those who say it should not be scheduled. Let the teacher divide his class group when he sees the need for it, the argument goes; he will thus achieve greater flexibility. Unfortunately, the average teacher does not operate this way. Given the option, most teachers would be so obsessed with their need to dominate instruction that they would only very reluctantly and only very occasionally divide their classes into small group.

We begin then by arguing that the small group is such a vital component of learning that it must be a scheduled activity—and scheduled as often as possible. Given this basic premise let’s turn our attention to other specific matters dealing with the small group.

First, what physical arrangements would make for the best small-group performance? We should not make the mistake of assuming that the small group can function effectively in any kind of environment. Adequate ventilation, proper seating, good acoustics, and attractive environment all produce better discussion. While there has been much well deserved kidding about the teacher who always wants to “put our chairs in a circle and begin to discuss,” such scorn should not make us forget that for most small group purposes, the arrangement whereby people who are speaking to each other can also face each other is the best arrangement. Very careful research has documented the fact that such an arrangement produces the most productive exchange of ideas. One interesting sidelight: even in a circular arrangement, members tend to address more communications to the person opposite them, not to the person on their right or on their left.

How small should the small group be? Possibly no other aspect of small-group learning has been so diligently researched. The research suggests that, first of all, there is no single ideal size for all groups. The best size depends on the nature of the task and the skills available in the members of the group. It has been suggested by Thelen that for any task-oriented group the ideal size is the smallest number that represents all the required skills necessary for the accomplishment of the task. In a group that is essentially discussion oriented the evidence seems quite clear that five or six represents the optimum number. With a group fewer than five, the individual members feel threatened: they know clearly they are on the spot. Such a threatening situation tends to inhibit free response.

On the other hand, in a group larger than five the amount of participation by the individual members can fall off sharply. The bigger the group, the greater the gap there is between the most frequent contributor and the rest of the group. In a typical class group of thirty, it usually happens that no more than one-third participate actively in a forty-five minute period. Even in the group of twelve or fifteen you will probably notice that only the most forceful individuals are expressing their ideas. My hunch—and it is only a hunch—is that the small group starts to look like a class when it gets to be about 14 or 15.

Does this mean that if teachers have been scheduled with a group of fifteen they must conduct the discussion with such a number? Not necessarily. They should experiment with group size, find to what extent all can be actively involved and, if necessary, subdivide the seminar of fifteen into two groups of seven or eight. One note about the composition of a small group. One study has indicated, perhaps surprisingly, that heterogeneous groups are superior to homogeneous groups in finding inventive solutions.

So much for the matters of physical arrangement, size, and composition. Let us next turn our attention to the nature of leadership in the small group. Here again there is much confused thinking. There are those who contend that only the teacher can direct the small group—and only the teacher who also teaches these same students in class. Others insist so strongly on the importance of a student-centered situation that they assert that only the student can lead. Both positions ignore the very simple point that leadership is a function of task. Later we shall attempt to point out more specifically how this is so. Even when student leadership is used, however, merely appointing the student leader does not end the teacher's responsibility. He must work with the leader, prepare him, help him see the kinds of questions that must be asked, help him evaluate the discussion. It is usually wise to rotate student leadership. Also, it is considered desirable to use the student observer in the group. The observer can serve as a summarizer, evaluate progress and, most importantly, can keep track of participation. Most teachers are blind to the extent to which students do not participate in most discussions.

We have heard much talk and have read much about the importance of

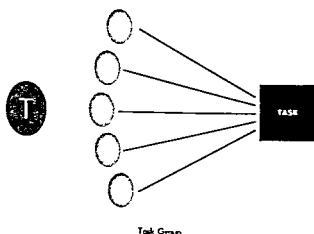
democratic leadership in a group. A few points perhaps need to be made here. Democratic leadership does not mean *laissez faire* leadership. It means, first, the active participation by the teacher as a guide who has respect for student opinions. It means the teacher must listen to student ideas, must give students a chance to express their feelings, and should within reason permit student preferences to determine the nature of the group task and the methods for group attack. In the long run, democratic leadership may be preferred by the group; initially, however, students resent it and prefer the most directive kind of approach. One study showed that in a group with an active leader as opposed to a group with only an observer, the leader-group more frequently arrived at the correct answer, since the leader was able to secure a hearing for the minority viewpoint.

Just as leadership will vary with the nature of the group task, so will the optimum length of time for any single meeting of the small group. As we discuss below the special types of small groups, it will probably be possible for you to make some inferences about the time needed. I would, however, like to make some general observations based on our experiences with two years of small group work. First, we have found that our single module of twenty-three minutes can be effective for some types of discussion. While some teachers complain that it seems a bit too short, I personally have found that it is desirable not to reach closure with the small group—but to have students leave with the issues still unresolved, with questions turning over in their minds. Also, some teachers report that our double module of forty-six minutes is just a bit too long for the low ability student to keep a good discussion going. But these judgments are probably best arrived at through our own experience, not by listening to ours. As a very general rule, let me suggest that a thirty-minute period might work well for most small group activities.

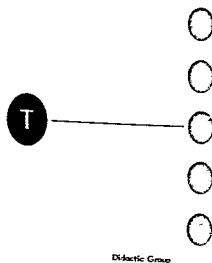
What of these small group tasks to which we have alluded? What can the small group do in the educational setting? Here again there has been a too narrow view of the small group. Some teachers think that the small group must be tied in closely with the content of the curriculum, and they get much upset if each of their small groups does not follow a given large-group presentation. Such teachers are too much concerned with covering the curriculum where they should be concerned with *uncovering* and *discovering* with students a world of exciting knowledge. And it is in the small group that uncovering and discovering best take place. Actually, of course, the small group has numerous roles and functions which can be identified simply by asking, "What can I do with a group of ten that I cannot do just as effectively with a larger group?" I would like to discuss with you several different types of instructional groups.

The first might be called the task group. In our "life adjustment" days we called it committee work. But it is not to be sneered at. The small task group can be an effective way of involving students in many types of meaningful work in which each member can make a significant contribu-

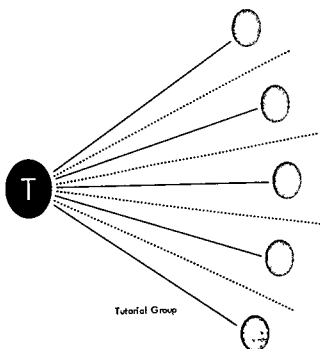
tion. The rules for the successful task group are known to all of us who have worked unproductively on committees: be sure the task is clearly defined and understood by all; be certain that roles and individual assignments are sharply delineated; provide the necessary resources or indicate where they might be obtained; check closely on the progress of the group and hold them to a realistic schedule; provide for some type of feedback to the larger group through oral, written, and/or audio-visual reports. This diagram perhaps illustrates the nature of the task group:



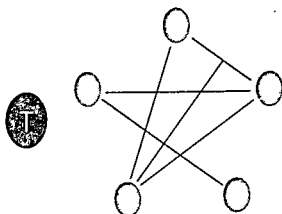
The second type of small group I would designate as the didactic group. In the didactic small group the teacher—or a student leader—presents material with the purpose of informing. At times we hear educational dogmatists state that the teacher should never teach in a small group. I always suspect such dogmatic generalizations. There is justification, I think, for the teacher occasionally to use the small group to review, to clarify, to instruct, permitting the students to interact with questions and comments. I think there are certain things a teacher can teach in a small group—and I mean teach—that can not be taught as well in a class of twenty-seven. I would diagram the didactic group like this:



The third type might best be called the tutorial. Here the emphasis is on individual instruction, usually of a remedial nature, although it may well be individual instruction, motivation, or evaluation for an independent study project of an advanced nature. The teacher—or again an able student—merely uses the small group session to deal in turn with the individual members. A good teacher can probably give effective individual attention to seven or eight students in a half-hour period and accomplish much real benefit for the learner. The small group tutorial might look like this:



The fourth type is one which we term the discursive group. This is the free and uninhibited discussion by students of a topic of prime importance to them. It would be a mistake for teachers either to exclude completely the discursive discussion or to indulge in it too much. It can make a very valid contribution to any class where the subject matter involves controversy or issues of significant interest to students. No preparation is, of course, needed by the teacher except to find the topic of sufficient interest for the class. And the teacher's role is merely one of an interested observer. All he needs to do is stay out of the way. He should listen attentively to student opinion, notice carefully who is taking part, watch closely for student reaction. Teachers, of course, need to be admonished about overusing the discursive approach. It can be a great waste of time and often is productive of nothing except the exchange of prejudices, serving merely to reinforce erroneous ideas. Teachers who boast again and again, "We have the greatest discussions in my class," often are deluding themselves if these so called "great discussions" are only bull-sessions. The discursive group might look like this:

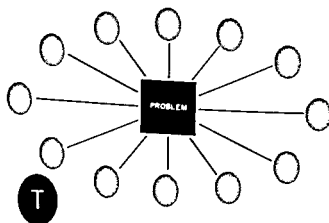


Discursive Group

The fifth kind of small group is perhaps best characterized by the term "brain storming" coined by Alex Osborn, the originator of the technique. "Brain storming," like the bull-session, is free and uninhibited. It tends, however, to be problem centered, or solution centered. The teacher's role in the "brain storming" discussion is merely to motivate, to get the ball rolling, and then to stay out. The teacher should not criticize, evaluate, or react negatively to any idea advanced in the "brain storming" session.

Here are a few suggestions culled from Osborn's books: 1. The ideal number for a brainstorming group is about twelve. 2. Choose a subject that is simple, familiar, and talkable. When a problem calls for use of paper and pencil, it usually fails to produce a good session. 3. Criticism is ruled out; adverse judgments of ideas must be withheld until later. 4. "Free-wheeling" is welcomed; the wilder the idea, the better. 5. Quantity is wanted. 6. Combination and improvement are sought. In addition to contributing ideas of their own, participants should suggest how ideas of others can be turned into better ideas, or how two or more ideas can be joined into still another idea.

Those who are interested in more information about "brain storming" are referred, of course, to Osborn's own works.



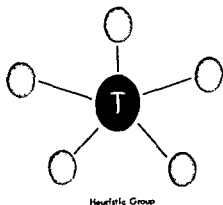
Brainstorming Group

The diagram below [at the bottom of page 288] shows the problem-centered concern of the brainstorming group.

The sixth type of small group might best be termed heuristic. Here the emphasis is on inquiry and discovery, and the teacher becomes what Suchman calls a responsive environment. Briefly, the emphasis on the Suchman inquiry training is to develop the skills of scientific inquiry—to make students skillful askers of questions. As you know, with Suchman's approach the students are first presented with a concrete problem to serve as a focal point for their investigations: in his particular use of inquiry the concrete problem is a film of a physical event. The second condition he establishes is a responsive environment: we make it possible for the children to gather whatever additional data they need by asking specific questions which are restricted to the "yes-or-no" format. Third, we provide guidance in the process of inquiry. He sees three stages emerging here: the first is episode analysis asking questions that make sure you have an accurate picture of what it is you are trying to explain. Stage two is called the determination of relevance, asking yes-no questions to determine which facts are relevant to the explanation and which are not, which conditions are necessary to the outcome of the filmed demonstration.

The third stage he calls the induction of relational constructs. This is where hypotheses are formulated and tested. The children construct an hypothesis based on relational constructs, test their hypothesis and find it tenable or untenable. The Suchman approach provides finally for critiques of past inquiries, using tape recordings of previous sessions.

While some of us have reservations about a possible over-emphasis on process in the Suchman inquiry training, all of us can learn much from the general approach of making students the question-askers and teaching them the skill of scientific question asking. A diagram of the heuristic small group might look like this:



The final type of small group we would call maieutic or Socratic. Here the teacher becomes the Socratic questioner and responder. He begins by posing a problem for the group: "Is *Death of a Salesman* a great tragedy?" Note that the problem posed should be one in which the answer can best

be determined through the open and honest exchange of informed opinion—through the dialog of searching minds. If the problem can be answered by consulting a reference book, it is not a suitable problem for the maieutic discussion. Having posed the problem and defined it clearly, the teacher does not retire to the rear; instead, he continues throughout the discussion to have a very active role and the good maieutic discussion can be led only by a highly trained teacher. It is the most taxing and demanding of all his tasks.

The maieutic discussion probably begins with the teacher challenging, disturbing, demanding definitions, driving the discussants back into a corner to examine their prejudices, to defend their position, to analyze their biases and preconceived notions. At times during the preliminary stage the teacher will play the devil's advocate, seeming to assume positions he really doesn't hold. The teacher's responses during this stage would probably sound negative to those committed to the dogma of interaction analysis—"Prove it. Define it. Why do you think that? Where is your evidence? Had you considered this possibility? Do you really mean that? What do you mean?" The first stage probably ends with the students confused, upset, and dismayed to see their prejudices demolished. But this is only a first stage. Unfortunately, some teachers—usually very young ones—leave them there. The first stage is destructive, and destruction should be only a necessary preliminary to reconstruction, the second stage.

At the conclusion of this first stage, it might be wise for the teacher to do a bit of constructive summarizing. "Now look, we have made some false starts but we also have come to some tentative agreements. We have defined tragedy as the fall of a great man through some external or internal force, a fall which leads to some greater reconstruction. Now let's take that definition and apply it to Miller's play."

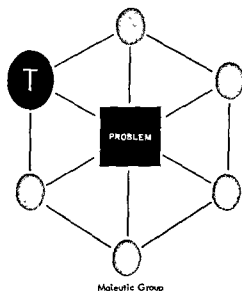
During the second stage the teacher must do a lot of good hard listening. (And did you ever notice what poor listeners we really are? We really don't hear what students are saying—with their words and their non-verbal communication.) We must listen then very carefully to every student answer and we make a split-second judgment about how to respond to it. Is the comment totally irrelevant and should I very gently get him back to the subject? Is his comment totally unproductive and should I just give him a bit of encouragement but try subtly to get another answer from someone else? Does this answer contain a piece of the truth which can be related to what has been said before by someone else? Does this response contain some glaring fallacy which should be challenged by some other student? Does this response contain a really fresh insight which should become the focus for a new line of thinking?

It is evident that during this stage the teacher becomes more than a challenger and more than a listener. He becomes a leader and a participant in the search for truth. Suddenly he finds himself caught up in an exciting

dialog of searching minds. He probes, directs, stimulates, entices, responds, channels, synthesizes. And he learns. Any teacher who doesn't learn from every discussion he conducts just hasn't listened.

I might make this other point about the small group maieutic discussion. Be sure that the students develop the art and skill of listening and responding to each other. With the unskilled teacher the small group discussion too readily becomes teacher centered, with all questions and answers aimed unilaterally at the teacher.

Note, as this diagram shows, the role of the teacher is the unique one of participant-leader, with the students responding to each other and to him. As I indicated this participant-leader role in the *maieutic* discussion is the most challenging kind of teaching. And anyone who says airily, "My students can lead a discussion just as well as I" is talking through his modular hat.



With these major types established, let us conclude with some final general matters.

First, can small group be evaluated? Obviously it can be and it must be. Some suggestions follow: First, there is need for group evaluation which says in effect, "How did we do today?" "Did we reach our goal?" "How many of us participated?" As mentioned before, an observer is of much help here. Second, there is obviously a need for teacher evaluation. But such evaluation should not be purely quantitative. The teacher is unwise who says in effect, "The one who talked the most gets the best grade." The teacher should learn to distinguish between meaningless verbalism and thoughtful analysis; he should learn to treasure the student who makes a few insightful comments and to chasten the garrulous dominator of discussion who really contributes nothing of substance. Finally, there is the need for individual student evaluation. In some cases it might be wise for students to keep a log of the discussions in which they participate.

Since in the small-group discussion teacher-student relationships are of key importance, it might be helpful at this stage to turn our attention to this crucial nature of teacher-student relationship. Again, there is no easy answer. The teacher must learn to play it by ear and must respond to individuals. While it is difficult to generalize, perhaps we can be of help by making some suggestions about handling certain typical small-group types. First, what do you do about the hand-waver; the student who constantly thrusts his hand in your face and almost demands your attention? To begin with, you cannot ignore him completely. This would only tend to make him resentful or else intensify his demands. Neither should you take the easy way out and call on him any time he has his hand waving. The best answer is to make him see that you value his participation, but you don't want others to be excluded. Second, what about the student who is the constant butt of class ridicule? To begin with, he needs your support. The class needs to learn that each of us has a right to be heard and that no student or teacher deserves ridicule. No matter how outrageous his questions or answers may be, find something in them to support. Make him see that your class is an open forum for the exchange of ideas, not merely a place where the sycophant can perform.

What about the shy type, the student who rarely answers just because he lacks security? Sometimes it helps, if the problem is especially acute, to talk to the student, to encourage him to participate and to prepare him for the discussion to come. You might say, for example, "John, tomorrow I'd like to discuss the garden symbolism in 'Rappacini's Daughter.' Will you give this your careful attention tonight and be prepared to make some comments tomorrow?" Also, it is helpful with this kind of student to ignore the oft-repeated warning about not mentioning a student's name first when asking a question; give the shy student some warning that he has to answer. Don't confront him abruptly with a difficult question. Say something to this effect, "John, I'd like you to give thought to this. The garden in 'Rappacini's Daughter' has a symbolic significance. What do you think the garden really stands for?" Then pause. Don't be afraid of silence, but give him a chance to think by amplifying the question. "Of course, it may not have any symbolic significance at all, but most who have read the story generally are convinced that it does have. Do you have any notion, John, as to what the symbolism may be?"

So much for the shy type. Now let us say something about the diversionist, the student who purposely or unintentionally sidetracks discussion. He must be dealt with firmly. You can answer his question of a diversionary nature briefly and then say, "That's not really the substance of our discussion. Let's get back to the point." At times, of course, the sidetrack can be illuminating and provocative, but for the most part the problem-centered discussion should stay on the track.

Finally, what of the shocker—usually a gifted student who tries to shock

you and his classmates by giving some outrageous answer. The obvious answer is not to be shocked, since that is the effect he wants. Deal with his ridiculous answer calmly and quietly but deal with it effectively. Do not permit nonsense (from any source) to go unchallenged in the classroom.

It is evident that the teacher needs much training to function effectively in all small groups, regardless of the type. What type of training is most effective? He should be knowledgeable about the findings of the specialists in group dynamics and sociometry; Shepherd's *Small Groups* is a good source here. He should explore the use of one of the more promising types of methods for analyzing student-teacher interaction in the small group. The work of Flanders and Amidon looks most helpful here; and Olmsted's *The Small Group* provides a good summary of other interaction analyses methods. But most of all the teacher needs some in-service training in the school on the spot. We at North Campus have effectively devoted entire faculty meetings to the matter of the small group and have used small group demonstration lessons with good effect. I think also the teacher needs much feed-back through observer reports, pupil rating sheets, and audio and video tape. The last, I think, has much promise for improving the teacher's performance in the small group.

But we must also help the student grow in his skills with the small group, and these skills can be presented in a large-group lecture. A few suggestions for teachers might be appropriate here: 1. Stress the importance of the small group sessions. Some compulsive students will feel that they are a waste of time and demand that you get on with the "business" of teaching; other students will be tempted to waste the time with frivolous talk. 2. Use the procedures suggested in selecting and training student leaders and observers; have them use an observer evaluation check list. 3. Help the students develop goals and objectives for each discussion: what should we try to accomplish in this session? 4. Stress the importance of listening skills in the small group. Critical listening is especially important here: they need to develop the ability to listen objectively to contrary points of view, to weigh arguments critically, to detect fallacies in thinking, to recognize prejudices. 5. Help them develop the skills of responding—knowing how to differ without animus and rancor, how to take a point made by another and use it as grist for one's own intellectual mill, how to advance discussion, how to get discussion back on the track. 6. Help students evaluate their discussions. From time to time tape a discussion and play it back for critical evaluation. Take a few minutes at the conclusion of each discussion to ask, "How did we do?"

I hope it is evident from this discussion that the small group serves so many vital functions that all schools regardless of their commitment to modules or to classes should find more and more time for small group activities.

Learning Through Diagnosis and Prescription

Individual learners are not given a fair shake in present day programs. The traditional school, created for conformity, causes problems for individuals. The curriculum needs reforming in the area of concept instruction, inductive process of teaching and learning, and in the instructional package. The text should be used differently and the rate of progress should be free. Human variability demands alternatives. The sound selection of alternatives demands diagnosis of the individual and the availability of alternatives from which to prescribe. These and other ideas are presented in the following selection by John I. Goodlad.

DIAGNOSIS AND PRESCRIPTION IN EDUCATIONAL PRACTICE *

John I. Goodlad

Human variability demands alternatives. The sound selection of alternatives demands diagnosis of the individual and the availability of viable alternatives from which to prescribe. Diagnosis and prescription are teaching functions. But the creation of alternatives is a larger educational function requiring actions lying largely outside the jurisdiction of individual teachers.

To say about educational improvement that "everything depends on the teacher" is to oversimplify and, in fact, to mislead. Teachers are caught up in interlocking systems of school and curriculum organization, of pupil assignment to classes, of pupil evaluation, and materials distribution—to name only some of the parts—which conspire to prevent appropriate action following diagnosis of the individual. Even the most creative teachers, bootlegging divergent opportunities for learning whenever and however they can, are frustrated by elements of the system in seeking to follow up their own diagnoses of individual student needs.

Creative diagnosis and prescription by teachers must be facilitated and, in fact, virtually legalized, if we are ever to talk less and act more with respect to meeting the needs of individual learners. The legalization of such teacher behavior demands fundamental redesigning of the setting in which schooling occurs.

* FROM John I. Goodlad, "Diagnosis and Prescription in Educational Practice," *New Approaches to Individualizing Instruction*, copyright by Educational Testing Service, Princeton, 1966. Reprinted by permission of Educational Testing Service and the author.

The key assumption of this paper, then, is that the monolithic structure of American schooling restricts teachers seeking to provide for individual differences among learners. This structure and the assumptions upon which it appears to be based neither condone nor provide an adequate range of alternatives from which to choose in filling prescriptions suggested by teachers' diagnoses. The paper focuses not on the processes of diagnosis and prescription but on the larger environment for schooling which must be manipulated if teachers are to engage productively in such processes. Three aspects of that environment are examined here: (1) expectations for schooling, (2) curriculum, and (3) school organization.

EXPECTATIONS FOR SCHOOLING

A widely held expectation for schooling has been coverage of a set body of material denoting elementary, secondary, or higher education. It is implied in such often-heard statements as: this child is not ready for school; he has completed the fifth grade; or, he has had calculus. Such an expectation has led to prescription of a common body of topics for a class or grade, with little or no predetermination of what is already known; to nonpromotion and grade repetition for learners who cover too little; to the distribution of identical textbooks to an entire class; to the preparation and use of tests stressing the possession of facts; to evaluative judgments based on group norms rather than progress on a learning continuum. These practices appear not to be compatible with our knowledge of individual differences or our growing concern for the individual.

This notion that "a school is to cover" has spread a drab cloak of conformity over virtually every act of schooling, splashes of light breaking the surface only because a few lighthouse schools and enlightened teachers have dared to differ. Children from upper socio-economic class families have been admitted early to kindergarten because they already possessed what kindergarten was designed to provide. Teachers have engaged children in trivia because they hesitated to tread on ground reserved for the next grade. Administrators have purchased identical books marked "4" or with four dots in order to match books by the thousand with fourth-graders by the thousand. High school teachers have criticized elementary school teachers for failing to bring all children up to grade level, meanwhile failing to provide adequately for children already advanced far beyond this restrictive expectation. And parents think they know what "fourth grade" or "A" in science means and happily report to grandparents that Susie passed.

Research techniques often have been used and the results applied without questioning the coverage conception of school function. One school system developed an elaborate scheme for selecting and appraising the

subsequent progress of five-year-olds who were "ready" for a kindergarten program not available to all. Nobody—nobody in authority, a least—raised the question as to whether selection, admission, program, and follow-up should have been for those disadvantaged children judged "not ready" for school. Current proposals for early education of children from harsh environments spotlight our past folly.

Many researchers, imbued with the desire to be value-free, have merely uncritically or unwittingly accepted the built-in values of the status quo. Decades of research into the effects of promotion and nonpromotion proceeded on the assumption that one practice could be shown to be superior to the other, nobody seriously questioning whether one is merely worse than the other or proposing that a new structure necessitating neither might be established. Researchers have more often been theory-free than value-free; the dry bones of their studies now mark the meandering trail to nowhere left by dust-bowl empiricism. Awareness of values and preoccupation with theory, which always have marked the first-rate empiricist, are at long last entering more pervasively into educational research.

In schools geared to coverage, teachers have been prescribers, not diagnosticians. They have used pre-tests sparingly, to say the least, in determining what to teach when. Their grouping decisions have been based on criteria narrowly confined to subject matter covered or to be covered. They have promoted and nonpromoted because this is the mechanism designed to adjust the child to the graded system. The pharmacy from which to choose alternatives is full—but close inspection reveals that identical labels are on most of the bottles.

Teachers not only are caught up in a system of relatively uniform values but actually are part of this system. To be deviant in values is to have acquired goggles not normally provided in the tool kit—goggles enabling one to see in new perspective. To behave deviantly is to exercise formidable courage. It is also to be foolhardy. Because teachers do not really have access to the right levers for change. To fight is to fight without weapons. Who or what is the opponent—a generally accepted set of expectations for education? This is an intangible adversary, to say the least.

Many teachers use to the full the degrees of freedom available to them; some are superbly imaginative in dealing with individual differences. But these degrees of freedom pale in significance before the realities of human individuality. Some of the most important variables which condition teaching no longer are variables by the time children and teachers come together. The most pervasive and compelling of these is what is normally expected of the schools.

To change mass expectations for schooling is no easy matter. But at least the evidence for change is accumulating. What is known about individual differences reveals the futility of uniform expectancies for all six-year-olds, for admission to high school, or for the several pursuits of one person. An individual is heterogeneous in the advancement of his traits, just as

the individuals in a group differ one from another. The concept of covering content is largely anachronistic; and the concept of common coverage for all at relatively equal rates of speed confounds the intellect. There simply is too much to cover—even if coverage could be equated with education—and selection of the most important bits and pieces is impossible. The school's function increasingly is being recognized as that of teaching students processes of inquiry through guided practice in them. They must learn how to learn.

The more one thinks of education as the cultivation of processes rather than the coverage of prescribed content, the more anachronistic many school practices appear to be. The Scandinavian countries need not be covered by Thanksgiving nor Africa by Christmas. And the heads of film libraries would sigh with relief on discovering that only thirty, not ten thousand, teachers want that film about Nigeria before the end of November. But it is very important to use these countries or others—perhaps several simultaneously—for probing into the problems posed by where one lives. Textbooks need not be distributed thirty of a kind to a class. Why not one of this, four of that, three of another, and two of each of those. Grade levels, promotion practices, and standards of quality providing only group comparisons come under suspicion.

Just a few powerful ideas emerging from productive scholarship suggest new expectations for schooling, shake the monolithic structure, and give direction to practices thought to be more compatible with what we now know. More and, hopefully, better alternatives from which to prescribe are finding places on the shelves of teachers' pharmacies.

CURRICULUM

At least three aspects of the current curriculum reform movement offer wider degrees of freedom to teachers seeking to prescribe the following diagnosis: (1) the identification of a few fundamental concepts around which the specifics of instruction are to be organized; (2) emphasis on inductive processes of teaching and learning; and (3) a diversified instructional package comprising textbook, supplementary books, workbooks, laboratory experiments, films, records, and programmed materials.¹

In the relatively recent past—and the practice is still widespread—the common features of the curriculum nationwide have been a series of topics, units, and problems distributed from September to June across grade levels. Teachers have not always been expected to use them nor have they always precisely followed the suggested progression, but there has been surprising uniformity, considering the decentralized political character of our

¹ Goodlad, John I. *School Curriculum Reform in the United States*. New York: Fund for the Advancement of Education, 1964.

educational enterprise. The so-called structural elements of the subject fields have been left to chance; the specific topics to be taught have been prescribed.

Current curriculum thought, emerging over a period of many decades, proposes the exact reverse. The specifics are merely to be used in achieving a grasp of the elements and their relationships. Admittedly, many of the new projects end up being quite prescriptive but the imaginative teacher who sees the interesting patterns lurking under the surface of every suggested task² soon devises his own and draws still others from the students. The role of teacher-as-diagnostician, rather than as mere prescriber-of-lessons, now becomes meaningful and reasonable. Learning comes closer to being the adventure it should be.

The importance of induction in curriculum thought is not new, either. But that list of topics laid out for the year works against inductive processes at the outset. Inductive routes to solutions take time; telling appears to be quicker. But we know that, for most kinds of learning, telling is woefully inefficient. Not only do students forget much of what they are told but, more important, they often fail to develop the self-propelling tools of inquiry.

The teaching role in promoting inductive thinking is to involve the student in observing, recording and collecting evidence, checking hunches, organizing relevant data, and formulating conclusions. Although group processes of this kind can be exciting exercises in discovery, the central pursuit is highly individual. The teacher becomes partner, data-source, observer, and diagnostician in the process, encouraging the student to be his own diagnostician. The teacher rarely organizes his class into three "achievement" groups. Individuals are brought into small groups for brief periods of time because teacher and students have diagnosed a common difficulty or interest. Individuals become a group of the whole to report and discuss their findings. The traditional pattern of thirty faces looking toward one person of supposed wisdom virtually disappears.

School principals have listed textbooks as the resource most useful and influential in the teaching program.³ This fact often has been decried by would-be curriculum reformers. But significant reality must be faced: students need something other than the spoken word to which to respond and textbooks provide a very manageable stimulus. Modern curriculum reformers, wisely I think, have faced up to the need for convenient, tangible stimuli and so have not eschewed the textbook but have sought to enrich it by providing a more comprehensive materials package with a textbook at the core. Some publishers are now producing several levels of materials

² Davis, Robert B. "The Madison Project's Approach to a Theory of Instruction," *Journal of Research in Science Teaching*, Vol. 2 (1964), 148-150.

³ *The Principals Look at the Schools*, 23-25. Prepared for the Project on the Instructional Program of the Public Schools. Washington: National Education Association, 1962.

dealing essentially with the same concepts. The teacher increasingly is being presented with a reservoir of instructional resources from which to choose those most pertinent to the learning needs of individuals and groups.

The most obvious kind of curriculum differentiation available for teachers seeking to provide for individual differences is in the pacing of students' progression through common learnings. Students' intellectual diet is thus varied in degree but not in kind. Although this idea is becoming rather widely accepted in principle, both research into the most viable sequences and the translation of research findings into programs are lagging. Some notable forward thrusts are the work under way at U.C.L.A.'s University Elementary School in devising a sequence of progression in group responsibilities, self-reliance, autonomy, relation to adults, and so on, for early childhood schooling; * in the University of Pittsburgh's Oakleaf Project; † and in Karplus' effort to build an elementary science program in accord with both a logical ordering of the material and children's readiness to deal with natural phenomena.⁴ All of these are exploratory projects; the results are not yet ready for general dissemination.

Teachers' diagnoses and prescriptions designed to differentiate learnings in kind as well as in degree of intensity or rate of progress open up still more complications, especially in regard to the value questions involved. How much freedom should a teacher have in choosing learning opportunities for students? Or, how far afield should students be encouraged to stray in following up initial interest in a problem?

In my judgment, the answers to these questions lie in setting priorities for each successive phase of schooling,⁵ in addition to setting general expectations for the whole of schooling. Each phase should embrace a time period of three or four years—long enough to assure cumulative impact of learnings thought to be peculiarly appropriate to that phase. But a student need not be physically involved in a given phase to participate in at least part of what it offers. He might, in fact, be simultaneously enrolled in two phases which together provide the variability essential to the varying development of his traits. This is the essence of nongrading.

Thus, early childhood schooling (from age three or four to five or six) stresses relations with peers, adults, and things in the environment, and command of oral communication skills. Children progress at differentiated rates, with the teacher exercising great freedom in providing a range of

* Currently proceeding under the leadership of Miss June Patterson, a faculty member of University Elementary School, U.C.L.A.

† This project provides for a cooperative relationship between the University of Pittsburgh and the Baldwin-Whitehall School District.

⁴ Karplus, Robert. *Theoretical Background of the Science Curriculum Improvement Study*, 46. Published by the Study, University of California, Berkeley, 1965.

⁵ Downey, Lawrence W. *The Secondary Phase of Education*. New York: Blaisdell Publishing Company, 1965.

activities designed to promote motor coordination in one child and symbolic awareness in another. Skill in reading is encouraged but is not the criterion of adequacy for the child's progress through the early childhood phase of schooling.

In the lower elementary phase (from age five or six to eight or nine), previous emphases now become secondary. Skill in reading, writing, and expression become primary and the school's resources are mobilized accordingly. Whether the child deals with this body of content or that is probably much less important than we have been inclined to believe, so long as what is studied leads him down inherently interesting and provocative paths. The teacher exercises great latitude, then, in the selection of substance, so long as the child's basic skill development is diagnosed and enhanced. In reading, instructional differentiation is in rate of progress; in almost everything else, differentiation in kind is a viable alternative.

In the upper elementary phase of schooling (from age eight or nine to eleven or twelve), the products of earlier emphases become means and are regarded as ends only temporarily when diagnosis reveals the need for correction or further refinement. Stress on independent learning and strategies of inquiry become primary. There may be, at any given moment, as many different activities under way as there are children in the room, with tasks varying both in kind and in complexity. The development of cognitive abilities such as application, synthesis, and evaluation of knowledge takes precedence over the possession of any specific bodies of information.

At present, we seem reluctant to establish phases of schooling and clear-cut priorities for each. A function such as reading is assigned to the whole of elementary education and is not assured at any point in the progression. We are grade-bound in our ordering of content, grimly hanging on to the most important bits and pieces concept of curriculum organization. And, certainly, we have done little to prepare teachers for their diagnostic roles of differentiating among kinds of learning opportunities or rates of progression through common learnings.

SCHOOL ORGANIZATION

Present patterns of school organization support common expectations for all learners, both in what is to be learned and in rate of progression through it. The graded school implies graded content specified for each year, graded materials, provision for individual differences only within limits defined by the grade, and nonpromotion as an adjustment mechanism. The self-contained classroom sharply restricts the availability of resources for adequate diagnosis and prescription. Nongrading is proposed as a device for breaking the vertical lock step; cooperative teaching, for increasing the range of personnel resources available to an instructional group. Both

proposals are receiving extensive analysis, support, and criticism in educational publications;⁶ both are being implemented in various forms at an accelerating pace.

Nongrading is essentially the removal of those grade levels which have traditionally marked the upward progression of students through the school. It raises the ceilings and lowers the floors of anticipated student performance to correspond more closely with the realities of individual differences. Nongrading, in intent, sweeps away the graded superstructure, graded content, graded textbooks, graded standards, and graded nomenclature to which we have long been accustomed. It facilitates the substitution of pupil progress uninhibited by grade barriers; subject matter organized sequentially around fundamental concepts, principles, and generalizations; instructional materials distributed according to the task at hand and student readiness for these materials; excellence determined from actual performance rather than comparisons with others; and still other provisions.

That nongrading has not always lived up to promises for it reflects, in large measure, our difficulty in envisioning fresh expectations for schooling. Nongrading is compatible with new thrusts in curricular and instructional thought; it is markedly incompatible with the traditional expectations for education discussed earlier in this paper. Nongrading removes a large part of the system to which curriculum and instruction have been adapted, leaving teachers with more degrees of freedom in seeking to diagnose and prescribe.

Cooperative teaching is essentially an expansion of the self-contained classroom to embrace more students and more instructional personnel. It casts aside the traditional teacher-per-grade-per-subject or group-of-subjects concept of teacher use. Instead of 30 students in a self-contained classroom with one teacher for all subjects, or in a departmentalized plan with a single teacher and one subject, visualize 75 or 100 or 140 students supervised by a team of teachers and teacher aides, deployed into instructional groups of various sizes, and space provisions appropriate to these groups. Cooperative teaching, in intent, is neither a self-contained nor a departmentalized plan of horizontal school organization. Rather, it is a scheme borrowing some features from both and providing for much more flexibility in grouping pupils and deploying instructional talent. Like nongrading, it provides more alternatives in the educational pharmacy.

Taken together, nongrading and cooperative teaching open up many

⁶ Brown, B. Frank. *The Nongraded High School*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963; Goodlad, John I. and Anderson, Robert H. *The Nongraded Elementary School* (Revised Edition). New York: Harcourt, Brace and World, Inc., 1963; Shaplin, Judson T. and Olds, Henry F., Jr., *Team Teaching*. New York: Harper and Row, 1964; Polos, Nicholas C. *The Dynamics of Team Teaching*. Dubuque, Iowa: Wm. C. Brown Company, 1965; and Herbert, John. *Team Teaching, a Working Bibliography*. New York: Teachers College, Columbia University, 1964.

alternative clusters of students to which any given pupil can be assigned following diagnosis of his needs. Traditionally, teachers simply have received the group sent on by the previous teacher and have enjoyed relatively little opportunity to predetermine the composition of a class. The criterion for placement no longer is simply pass or fail but can be the estimated "fit" of pupil and teacher or pupil and group. Individual differences are considered prior to as well as after pupil assignment to teachers and classes. A significant area of educational decision making no longer is in the realm of the routine and automatic but now comes within the teacher's span of control.

There is little point in talking about teachers as diagnosticians unless there are alternatives from which to prescribe. Nongrading and team teaching provide organizational alternatives not available in the conventionally organized school.⁷ Teachers are virtually forced to appraise each child carefully in weighing the potential advantages of one possible placement over another. They become diagnosticians for one significant aspect of schooling even before students are assigned to them. Hopefully, the diagnostic role begun outside of the classroom is extended into day-to-day pedagogy.

CONCLUSION

This paper has proposed that teachers are limited in what they can do to provide more meaningfully for individual differences among learners by factors largely outside of their control which predetermine their degrees of freedom—namely, expectations for schooling, the institutional curriculum, and school organization. To provide even imaginatively for individual differences in the classroom without fundamentally redesigning the larger educational environment is to fall far short of adequacy. Preceding pages propose changes in educational expectancy, curriculum and school organization which, if effected concurrently, would profoundly broaden the alternatives available to teachers and create some urgency for them to expand and refine their roles as diagnosticians. These roles in turn pinpoint some pressing needs for research and development in education.

First, school counselors must take the lead in developing systems—hopefully supported by electronic data processing techniques—for collecting, storing, and retrieving pupil personnel data deemed most essential to diagnosis and subsequent prescription. Second, teachers must become perceptive not only in interpreting these data but also in observing subtleties in children's behavior and in using the whole for individualizing instruction. Third, curriculum specialists must develop curriculum grids based on taxonomical analyses of behaviors, concepts, and sub-concepts to be developed in each phase of the schooling hierarchy. Fourth, researchers must experiment with

⁷ Goodlad, John I. "Nongraded Schools: Meeting Children Where They Are." *Saturday Review*, March 20, 1965, 57-59, 72-74.

learners' responses to and progress through a wide variety of stimuli and sequences of stimuli. Fifth, curriculum makers must stock teachers' pedagogical pharmacies with the widest possible range of instructional alternatives. Sixth, school administrators must remove the rigidities inherent in conventional ways of organizing schools and classrooms. Seventh, test makers must prepare the instruments essential to evaluating all aspects of the curricular grids.

Promising beginnings in all of these tasks already are clearly visible. But much work remains to be done if teachers are to have the scientific underpinnings required for sustaining their diagnosis and prescription in educational practice.

Better Planning: Better Teaching

The teacher as the director of learning is responsible for identifying the kinds of changes to be produced, for selecting the experiences that will facilitate the achieving of the desired changes, and for organizing and administering the learning experiences so that the learner will be motivated to participate in the appropriate experiences to produce behavioral change. To accomplish this goal a teacher must plan. In this next selection, Anne R. Gayles sets forth principles for instructional planning.

MORE EFFECTIVE TEACHING THROUGH BETTER PLANNING *

Anne R. Gayles

The role of learning is extremely important in the preparation of adolescents and youth for citizenship in a democratic society. The learning process represents the channel through which the adolescents strive to acquire the habits, skills, knowledges, attitudes, values, and appreciations which are necessary for effective participation in a democracy. Learning, therefore, becomes a process by which changes in behavioral patterns are produced through experience. The kind and quality of experience will determine to a great extent the nature and quality of the learnings adolescents acquire. The teacher, as the director of learning, is responsible for identifying the kinds of changes to be produced; for selecting the experiences which will facilitate the achieving of the desired changes; and for

organizing and administering the learning experiences so that the learners will be motivated to participate in the appropriate experiences to produce the desired behavioral changes. To have students learn the appropriate things in the most effective way, a teacher must engage in instructional planning.

The key to successful teaching is good planning. There is no substitute for it. Quality learning is a result of effective instructional planning. A plan for teaching is a guide for action which specifically identifies objectives, proposals for achieving desired objectives, materials and resources to be used in executing proposals, and means of determining the degree to which desired objectives have been fulfilled. In effect, a plan for teaching is a detailed statement of what the teacher envisions the educational situation to be. It is the teaching process in projection. The teaching plan or "service tool" which provides a guide for action in working with adolescents assures the teacher of involving the learners in meaningful and quality educational experiences.

Instructional planning for the modern secondary school teacher is a complex task which requires unlimited knowledge and skill, a host of activities, materials, resources, equipment and records, and many flexible, specific plans based upon objectives stated in operational terms. This is true because secondary school pupils represent a particular group of human beings, the adolescents. Motivations, capabilities, goals, and ways of learning are somewhat different for this group than for children or adults. Their many differential characteristics call for individualized instruction. Thus, the learning process for adolescents is mediated by their characteristics, as adolescents, and further complicated by the fact that each student adds his own unique personality, intellect, problems, goals, background, and social status to the general learning equation.

Organization for effective learning activities in the secondary school requires planning by the teacher before the classroom activities begin and planning by teacher and pupils while instruction is in process. Planning for effective instruction must be based upon an understanding of the democratic culture, the goals of education, the goals of secondary education, the immediate learning situation, the particular group of learners, the changing society, the principles of human growth and development, and the dynamic nature of learning and its principles.

In essence, instructional planning is a means of organizing subject matter, teaching techniques, and teaching devices so as to create effective teaching-learning situations. In order to carry on the major processes of planning, teacher and pupils must answer the following questions:

1. What objectives are to be achieved?
2. What specific content needs to be studied?
3. What learning activities engaged in by the students will achieve the objectives?

4. How will appropriate learning activities be organized and guided by the teacher?
5. What specific methods are to be used in the realization of the objectives?
6. What materials and resources are necessary to make the learning activities meaningful to the learner?
7. What evaluative devices will be appropriate to use in determining the extent to which stated and accepted objectives are realized?

Principles which must form the basis of effective instructional planning in the secondary school are as follows. The educational experience should:

1. Involve a thorough understanding of the learner, the nature of the learning process, and the learning situation.
2. Consider meaningful content which the teacher is thoroughly acquainted with and understands.
3. Provide for the personal involvement of the student. The learner should be an active rather than a passive participant. This personal involvement creates motivation, which is an essential condition of learning. Teaching is more effective when the learner has a keen abiding interest in that which is being learned.
4. Involve goal-setting by the learner. First, it should provide for a situation in which the learner will have a definite idea of what is to be accomplished; secondly, it should provide for learning with understanding rather than rote learning or learning by a formula; and thirdly, it should create a learning situation composed of purposeful educational experiences in which facts and skills are learned in connection with meaningful activities of which they are integral parts.
5. Provide for individual differences. The learner should be actively engaged in the learning process in terms of his unique needs, interests, and abilities.
6. Involve a variety of concrete, integrative experiences. Learning is facilitated through flexible life-like experiences.
7. Provide for tasks which are adjusted to the level of maturity of the learner. Learning is more effective when the learner is in a state of readiness.
8. Provide for a learning situation in which the learner will be able to use the knowledges, skills, and attitudes sought for in the educative process.
9. Provide for frequency of repetition. Learners should be given many opportunities to practice the skills taught, to apply the knowledges taught to real life situations, and to perform the desired behavior.
10. Provide for reinforcement. It is of utmost importance in the learning process to focus attention upon the effect of the response upon the learner. Learning is facilitated when the teaching-learning situation takes

into consideration the kinds of behavior for which a learner has been rewarded or from which he has received satisfaction.

11. Provide for a measure of success. The experience may be difficult, but there should be a feeling of progressive movement. The greater the satisfaction, the surer the learning.

12. Provide frequent opportunities for student self-evaluation. Learners need to identify their weaknesses and strengths as they strive to achieve meaningful and acceptable goals.

13. Provide for continuous teacher evaluation of the learner in terms of the specific goals sought. The evaluative process should be critical and objective, and result in suggestions for improvement.

The above-stated principles do not represent all of the effective guidelines for good instructional planning, but must be followed if functional high-level learning is to take place. Meaningful, quality learning is a necessity for producing well-rounded adolescents who are capable of coping with the problems and changes of a democratic society.

Education occupies a position of crucial importance in the determination of the future of America. The public high school has a major responsibility for perpetuating and improving the society. Therefore, the teaching-learning process for adolescents is of paramount importance and demands the *best* in instructional planning.

A Process of Critical Inquiry

Education is the process of freeing oneself from irrationality and rigidity. The ability to inquire is a basic ingredient of freedom and a basic part of the educative process. The human mind is naturally an inquiring mind. Eugene R. Howard stresses the need for critical inquiry in learning.

YOUR EDUCATION—A PROCESS OF CRITICAL INQUIRY *

Eugene R. Howard

Fellow graduates, members of the Board of Education, honored guests, ladies and gentlemen:

I am very pleased—in fact I am delighted that you, the students of the

* FROM "Your Education—A Process of Critical Inquiry" by Eugene R. Howard. Remarks to the class of 1966, Ridgewood High School Commencement Exercises, June 10, 1966. Reprinted by permission of the author.

Class of 1966, have asked me to be your commencement speaker this evening.

Each of you has recently received a letter from me in which I congratulate you on the occasion of your graduation and in which I make a few remarks about what I think an education is. Basically, in that letter, I made two major points about your education:

First, I said that you did not get an education at Ridgewood. You have only been started on the path to an education.

Then I said that education is a process, not a product. "We know," I said, "that it is not possible for a school to give a student an education. Education is not a commodity like groceries, it is a way of life."

I then said two things about this process—this "way of life." I said that it involves a competency called critical thinking and that it involves a curiosity about the world around us.

I would like to take this opportunity this evening to consider with you what I meant by education as a way of life. More specifically, I would like to develop further the concepts of education as critical thinking and education as inquiry.

For this reason I have entitled my remarks, "Your education—a process of critical inquiry."

The world in which we live is made up, to a very large extent, of a large number of myths, superstitions, prejudices, and half-truths. The human race has an incredible capacity to see what it wants to see and hear what it wants to hear. The history of humanity has been a history of creativity stifled by prejudice and superstition, of inquiry harrassed by dogma.

The quest for truth is a dangerous quest, for a piece of truth always threatens the *status quo*. Nothing threatens a man more than the possibility that he may have to restructure his own thought once he has made up his mind about something.

"Don't confuse me with the facts, my mind is made up" might well be the motto of the rigid, static thinker. The forces of mediocrity in this country are strengthened by people who think in this way.

But such people are not free human beings. They are dominated, not by a tyrannical government or by a feudal society but by their own prejudices and rigidities.

Education, in one sense, is the process of freeing oneself from irrationality and rigidity. It is the process of asking questions which need to be asked, of phrasing these questions in such a way that they can be answered, and of seeking information on which answers can be based. This process, we call the process of inquiry. The ability to inquire is a basic ingredient of freedom and a basic part of the educational process.

The human mind is naturally an inquiring mind. The young child is constantly asking questions—"What makes the sky blue?" "What are clouds?" "Where did I come from?" "Why does it rain?" These and thou-

sands of other questions—(some of them make sense, some don't)—are asked of parents and teachers of the young child.

Unfortunately we soon teach the child that question-asking is the job of the teacher, not the child. A recent study which analyzed what went on in conventional classrooms in several different high schools shows that the teacher talked 80% of the time and that the teacher asked nearly all the questions. Students spoke about 20% of the time, primarily for the purpose of answering questions posed by the teacher.

Is this the way to teach young people to inquire about the world around them?

In our schools and in our homes we must stop discouraging the question-asker. Instead we must, as parents and as teachers, help the child ask his question in such a way that he can find the answer.

When a person has become competent in the process of inquiring and seeking answers, we may reasonably call him educated.

The electrician attempting to diagnose the failure of a piece of machinery will go through the process I am describing. So will the scientist seeking a new heat-resistant alloy or a housewife deciding how to vote in a school board election or a writer deciding which of our society's myths he wants to expose—all of these people are asking important questions and seeking answers about the real world around them. To the extent that their answers are rational and based on knowledge rather than prejudice—to this extent they will make a contribution to building America.

But education is more than inquiry, although I must say that without inquiry, education is quite useless. Education is also, as I said in my letter to you, a process of critical and analytical thinking.

It is a dissatisfaction with the "pat" answer, the over-simplification, the easy solution. It is an insistence on the part of the individual that conclusions and generalities—his own and those of others—be based on facts. It is a desire to seek knowledge, not for the purpose of supporting a conclusion already reached, but for the purpose of forming a basis for a conclusion.

An understanding of factual information about the world around you is not enough. It is no longer sufficient just to read and understand what your newspapers and magazines tell you about, for example, what is going on in Viet Nam. This information must be assimilated in such a way that it, not prejudice, becomes the basis for the formation of an opinion.

Until opinion-formation becomes rooted in knowledge the individual cannot be free. He is at the mercy of the propagandist. He is the property of the demagogue who can control him through appealing to his emotions and prejudices. He becomes the victim of the half-truth and the unsupported assumption.

The educated person declares war on sloppy thinking wherever he finds it—in the shop—in the home—in the classroom. He maintains an open mind until the facts are in. He examines critically his own position and the positions of others on the issues of our time.

I have said that we live in a world made up, to a large extent, of illusions, half-truths, and prejudices. These are the veils which separate man from seeing the world clearly and responding to it effectively.

But we are also living in the age of the goof-off—the age of the half-done job; of the easy answer for the complex question—of the drive for something for nothing. Our country is moving headlong into mediocrity at a time when the problems facing us demand excellence. Our country is full of mechanics who can't fix cars, waitresses who forget your order, carpenters who can't saw a board straight, salesmen who won't sell, and executives who do business on the golf course. We have 6% unemployment and jobs requiring only a willingness to learn go begging. The question of the day is "What's in it for me?"

Our times call out for thoughtful, flexible people. People who can use knowledge in the process of decision making, people who can define questions and seek answers.

If we have too few of these people we will continue our slide into mediocrity, and the end result will be that we will lose both our personal freedom and our political independence.

H. G. Wells has described history as a race between intellect and disaster.

If we are to avoid disaster we must all of us work to develop that within us which is uniquely human. The quality of inquiring about ourselves and about the world about us. The ability to subject conclusions and opinions to critical examination.

For man is his own worst enemy. He is no longer, as he once was, threatened by nature. He is threatened only by his own ignorance about himself and the forces which affect him.

"Freedom," said Plato, "is no matter of laws and constitutions; only he is free who realizes the divine order within himself, the true standard by which a man can steer and measure himself."

We are now poised at the opening of America's second frontier. Our first frontier, the one which was declared closed in the 1870's, was a physical one. It consisted of land to be cleared, railroads, cities, and farms to be built, minerals to be discovered and mined, Indians to be pacified.

The frontier of the 1960's, 70's and 80's is an intellectual one. It consists of scientific and engineering problems to be solved, a basis for international co-existence to be evolved. The dilemma of poverty in the midst of plenty, the question of freedom and equality of opportunity for our

people—the question of automation and unemployment—the question of the role of big government in an increasingly complex society. These questions and many others like them can be answered only by a concerned, thoughtful public. We fight ignorance with knowledge—prejudice with rationality—apathy with sensitivity to the basic problems of our society.

The educated person is the person who can continue to learn when he no longer has the school to assist him. He is the independent learner. He seeks knowledge because he needs it in order to do his job well and in order for him to think rationally about the problems of our time.

Such people are rare in our society. Some that I have known have never been inside a college or university. The educated man inquires, seeks, reads, listens, analyzes. He is in harmony with his world, not in conflict with it. His quest is a positive one based on a realistic appraisal of the forces which affect him. He is critical but not cynical. He realizes how much he does NOT know.

We on the staff at Ridgewood hope that we have given you a start towards becoming the kind of person I have been talking about. The life of the inquiring individual is a rewarding life—a full life—a stimulating life. It is a life in which learning never ceases, because there are always new questions to ask, new situations to analyze, new knowledge to assimilate and apply.

We hope that we have given you a start towards becoming educated men and women—not men and women who *know* answers but who *seek* them. If we have succeeded in this goal alone, even with some of you, our efforts will have been amply rewarded.

Creativity and Learning

If varying strategies are made available to students, the students must then make a choice between alternatives. One aspect of teaching is involvement with learners in the unique human experience of choice-making. Learning becomes a selection process in which the learner chooses from the environment certain elements to which he desires to respond. Learning is not only selective but also creative because the learner can create alternatives that are not present in his existing environment. For the individual, each learning is to some extent new, fresh, and original, the personal creation of the learner, according to Edward C. Weir. The teacher's instructional approach is to aid the learner in this process.

CHOICE AND CREATIVITY IN TEACHING AND LEARNING *

Edward C. Weir

We may define learning as the "self-incorporation of meaning into the experience of the learner." But what is the meaning of such a definition?

Among other things, it means that learning is a process of personal choice-making; it is activity in which the learner, through his own experience and out of his own motivations, decides for himself what he is to believe and what he is to do with his life. The definition also means that learning is an act of creation in which the learner brings into being new meanings for the ordering and enrichment of his own living.

Teaching, then, is involvement with other human beings in the uniquely human experience of choice-making. It is involvement with other human beings in the processes through which man's unique creative powers are brought to bear upon the mysteries of existence.

To say that learning is the "*self-incorporation of meaning*" is to say that the dynamics of learning, both in its initiatory and developmental phase, lie within the organism rather than in the environment. The individual learns only that which he chooses to learn. While it is true that the environment may limit the array of alternative meanings among which the learner can choose, it is equally true that the learner is the final arbiter as to what he is to learn, and it is also true that the individual frequently can re-arrange the environment so that he creates new alternatives. The choice of what is to be learned will be made by the individual in terms of how important the choice appears to him and not in accordance with how objectively important it is or how important it obviously is in the eyes of the most reasonable and authoritative people. His choice of the particular alternative which he will take into his experience and employ in regulating subsequent behavior is a function of the learner's recognition of the relationships between the alternative and his own concept of self. Those alternatives which he sees as strongly central in their relationship to his self-concept will be most effectively learned. Finally, he will tend to appropriate into his field of meanings those alternatives which serve to enhance his own self-concept.

Central in this view of learning is the idea that learning—and all human behavior for that matter—is a selective process. Or perhaps a more appropriate statement would be that learning is a *selecting* process.

The human animal is not a passive organism, waiting like a lump of

* FROM *Phi Delta Kappan*, June, 1962, pp. 408-410. Reprinted by permission of *Phi Delta Kappan*.

clay to be moulded by the accidents of environmental circumstance. The individual himself is a circumstance—the most important circumstance in his own environment. He selects from the environment those stimuli to which he is to react, and he is not only his own best judge of the appropriateness of his subsequent action, he is in the final analysis the *only* judge. No matter how wrong-headed or wrong-hearted his action may seem to others—to his teachers, his boss, his parents, his friends and enemies—the action which he takes is to him always the “right” action. He may modify his judgment after the event and consequently change his line of action, but it is the behavior who does the judging and makes the change—and no one else.

The application to learning is clear. We select from the environment certain elements to which we respond. We can only learn in those situations which seem to us to require action on our part. Learning, therefore, cannot be imposed upon another merely by repeatedly exposing him to stimuli which we select, requiring him to behave in ways which we know to be correct and presenting him from time to time with the results of *our* objective judgments about the quality of his behavior. The individual may learn while involved in this process, but he only does so to the extent that *his* views as to what is important, *his* discriminations with regard to appropriate behaviors, his subjective appraisals of the effectiveness of his own behavior happen to coincide with our own. Such complete and precise unanimity of perceptions between two or more individuals, each with his own unique complex of experiences and meanings, is a rare coincidence indeed.

What more often happens is that the learner goes through the motions of the prescribed action and presents for the teacher's observation the formulae—or at least some of the formulae—which he knows the teacher deems correct. Whereupon the teacher gives a grade or in other ways indicates her judgment as to the amount of learning that has occurred. The grade, however, is not very meaningful, for regardless of what the grade says, the learning which results from such a process of “going through the motions” can only be superficial and transitory. It is true that the learner “chooses” such a course of action, but he makes this particular choice from among other alternatives all of which he sees as being even more unpleasant and less self-enhancing. Place him in a situation where other alternatives are present and he will behave differently and learn differently. In this situation, he chooses to behave so as to give the impression of learning in order to satisfy a need which in his view will only be present as long as he is taking this subject, is with this teacher, is in school—and the learning will fade away when the need for the learning is no longer present in his field of perceptions. Furthermore, even though he “chooses” to do what the teacher tells him is best, the choice area is peripheral to his central concept of self; it is low on his own personal hierarchy of importance. As long

as it remains so, the resultant learning—or at least that which the teacher or other observer has been able to detect—will remain peripheral in its effect on his behavior.

We are not saying that no significant or lasting learning occurs in instances such as the above, but rather that the learning we look for and give our greatest attention to in the kind of teaching described above is seldom significant or lasting. Unobservable to our eyes, since we are not looking for it, is the extremely important learning that frequently does occur and remains to shape the direction and quality of the learner's entire life. He may learn, for example, that it is the surface things that count, not how you really are inside. Keeping up appearances, putting on a good "show," maintaining a proper front, these are the determinants of passing marks in the school of life, not what you really think and live. And, of course, if the individual does incorporate such a meaning into himself through his school experiences, the direction of his life is likely to be toward narrow ends and the quality of his living marked by preoccupation with superficiality. He will not be inclined to probe the deeper, richer meanings, the ennobling potentialities of his existence. And having made superficiality central in his own living, having inadvertently cheapened his own self-concept, he can only relate himself to others at a superficial level. He cannot share with others in the significant concerns of living, because he has nothing to share, nor can they share with him, for the deeper meanings others may have to share can have little meaning for him, little relevancy to his view of what is central in his life.

To say that learning cannot be imposed, but is a matter of choice by the learner is not to say that teaching cannot occur. Teaching, as we all know, can occur and does occur. Successful teaching—that which brings about growth in the learner and helps the learner to become what is in him to become—is of a particular kind. It seeks to help the learner to know what he is and what are his deepest wants in life. It asks of the learner, "What do these life situations mean to you? Do you sense any inconsistencies or inadequacies? What are your worries and fears, your problems, concerns and anxieties? Do these ideas or this area of human knowledge relate in any way to your life problems and goals? How can I be of help to you as you explore and expand the meaning of your universe, as you seek to identify the alternative courses of thought and action available to you? What opportunities can I provide for you to share in the thinking of others and thereby sharpen and broaden your own thinking? What support can I provide that will stimulate the development of your own unique creative powers, that will build your self-confidence in trying out new ideas in accepting both success and failure as opportunities for learning and growth, in making increasingly realistic evaluations of your own ideas and actions as you move continuously forward in your progress toward your own life goals? How can I help you to employ your own intelligence to enrich the

quality of meaningfulness in your living? *What can I do that will help you grow in your power to make effective choices?*"

THE CREATIVE NATURE OF LEARNING

Learning is not only selective, it is also creative. Our choices are not always limited to the alternatives that are—or appear to be—objectively in the environment. Man is continuously restructuring his environment so that it takes on meanings that were not there before. These innovations in the field of meaning cause the environment to take on a new configuration, so that, insofar as our behavior is concerned, we are now interacting with an environment which in some respect is different than it was before. We respond, in other words, not to the environment as it appears to others nor even solely to the environment as it objectively is. *We respond primarily to the environment we create for ourselves.* Even physical innovations occur because someone refuses to accept descriptions of environmental situations which common sense prescribes or logic dictates. Some one says, "What if it really isn't this way at all? If it were really some other way, what would happen?" He creates a new meaning, he sees the environmental situation in a new way, he finds new possibilities for action available to him, he acts accordingly, and a wheel or a theory of evolution is invented. Thus did Copernicus create a whole new universe by insisting that the obvious was not true. Thus did Kettering develop the self-starter by flouting some of the most fundamental "laws" of engineering. Thus is nuclear energy now available to us—for good or bad—because Einstein challenged an axiom.

All men, then, are innovators. Each man creates his own universe through his perceptions of it and he behaves in ways which are consistent with the universe he creates. Rather than the environment imposing its order upon us, we impose order upon the environment. The order which the individual imposes on the environment may not make sense to anyone else; indeed it may be so out of line with reality that the individual lives in a world of delusion; nevertheless, it is the only order which makes sense to the individual. The meanings the individual creates, however disorderly they may appear to be, are always in the direction of orderliness.

Learning, then, cannot be thought of as the mere duplication of an act performed by someone else nor the copying of an idea developed by someone else. For the individual, each learning is to some extent new, fresh, and original, the personal creation of the learner. That is why genuine learning is so exhilarating an experience. That is why the world's most interesting, stimulating, and psychologically integrated people are those who live their lives as one long experience in learning, whose living is a continuing act of creation. Significant learning—that which involves the crea-

tion of deep personal meaning by the learner—is never routine nor dull. It may necessitate the most rigorous attention to routine. It may require systematic, persistent, and repeated effort of the most exhausting kind. It may be accompanied frequently by frustration and despair as our struggles to create an adequate meaning for experience meet with repeated failure. But it is never dull. The overtone is elation. Anyone who has observed or participated in a group of learners who are struggling to solve a problem that is important to them knows exactly what we mean. In such a situation—particularly as one senses that the final moment of creation is near—the atmosphere fairly crackles with excitement. These moments are, of course, the greatest joys of teaching, and the teacher who frequently experiences such moments is a successful teacher indeed.

The teacher who is sensitive to the intrinsically creative nature of the process of learning is the teacher who will say to his students, "Trust in your own creative powers, for your life can be no other than your own creation. The whole universe, through all the eons of timeless time, has conspired and is still conspiring to make in you a magnificently ironic design: you are the only creature on the face of the earth who is not just creature, but creator. As creator, you become what you were designed to become only through the act of creating yourself. Like all the living things on earth, you are form; but the essence of the *human* form inborn in you is that of becoming. You are a thought, a hope, a dream, and a passion. And the thought and the hope and the dream and the passion are yours. You are an idea that no one else has ever had.

"Here is my life that I have created. Here are my thoughts and hopes and dreams and passions. Here are the images of the universe that I have created for myself. They are no more beautiful nor good nor true than the images of your creation—unless you find them so. Take of my images—and of me—whatever stirs you or challenges you, whatever inspires you to raise your own questions and helps you to discover your own answers, whatever generates in you the quest to find out what you are and what you can become. Take of my images—and of me—whatever causes you to trust your own experience so that you can deal with experience meaningfully and productively. Take of me—your teacher—only that which you believe will help you to become the you that you want to become. Only if you make use of me in this way can I become what I want to become—your teacher."

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The Changing Administrative Practices

Improving Supervision

Improvements of Instruction

Because the improvement of instruction is the principal's first responsibility, the ways in which this task can be accomplished were of interest to the Associated Programs in Educational Administration, sponsored by the Kellogg Research Foundation. William T. Bush lists these ways in the order of the frequency with which they were cited by leading school administrators throughout the United States.

WHAT ADMINISTRATORS DO TO IMPROVE INSTRUCTION *

William T. Bush

Once he has established defensible goals for his educational program, the competent administrator is trying constantly to evaluate and improve

* FROM *Phi Delta Kappan*, November, 1959, p. 64. Reprinted by permission of *Phi Delta Kappan*.

instructional techniques. How he sets about doing so was the subject of a study conducted recently at the University of Mississippi under sponsorship of the Kellogg Research Foundation, as part of the Associated Programs in Educational Administration.

Using the Flanagan critical incident technique, the project staff attempted to determine the behavior requirements for competency in specific administrative task areas. The specific task on which we are here reporting was to improve the instructional program. Some 708 selected school administrators throughout the U.S. revealed, in their responses to a questionnaire, the following behavior requirements, listed in order of frequency of citation:

1. Encourage teachers to use a variety of instructional techniques.
2. Involve the staff in formulating an in-service training program.
3. Utilize demonstration teaching to acquaint teachers with various teaching methods (respondents mentioned the following methods: lecture, recitation, laboratory, seminar, and project).
4. Use faculty meetings to discuss ways in which instruction might be improved.
5. Use democratic leadership methods while conducting instructional meetings (respondents stressed the avoidance of administrative domination of the meetings).
6. Conduct research projects in different subject areas and grade levels in an effort to improve instruction.
7. Devise an intra- and inter-visitation program for administrators and teachers.
8. Secure resource personnel to assist in workshops and other instructional meetings.
9. Acquire and administer standardized tests to indicate strong and weak instructional areas and individual differences.
10. Evaluate and follow up instructional workshops, conferences, and demonstrations.
11. Encourage the grouping of students to provide for individual differences.
12. Obtain new equipment to make instruction in specific subject areas more meaningful.
13. Organize orientation programs to assist new teachers.
14. Suggest special instructional projects, such as science fairs, student banking programs, field trips, and job experience programs that will make subjects more life-like and meaningful.
15. Prepare handbooks, guides, and worksheets to assist teachers in improving instruction.
16. Suggest to teachers various methods of dealing with classroom disciplinary problems (respondents mentioned the use of student courts, self discipline, suspension, etc.).
17. Use tact in offering constructive criticism to teachers.

18. Demonstrate to teachers the effective use of audio-visual equipment.
19. Explain new instructional procedures to parents (respondents stated that this would gain parental support for the instructional program and, therefore, strengthen it).
20. Provide released time for teachers to attend instructional meetings (respondents mentioned the use of substitute teachers, holidays, etc.).
21. Provide more time for classroom instruction by relieving teachers of menial tasks (respondents suggested that menial tasks could be handled by student assistants, full-time administrative secretaries, etc.).
22. Use community facilities and resources.
23. Employ the assistance of the staff in the selection of audio-visual and other instructional equipment.
24. Allot sufficient time for observing and supervising instruction.
25. Arrange extension classes for the professional improvement of the staff.
26. Conduct follow-up studies involving graduates of the institution.
27. Discuss homework assignments with teachers.
28. Encourage the reading of professional articles and books to improve instructional techniques.
29. Encourage the use of lesson plans to improve the instructional program.
30. Follow up classroom visits with teacher conferences.
31. Lengthen class periods to improve instruction (respondents suggested 60-minute periods for secondary classes—30 minutes for recitation and 30 minutes for supervised study).
32. Pay staff members' expenses for attending professional conventions.
33. Prepare and issue agenda prior to instructional meetings.
34. Prepare devices for the evaluation of instructional aids.

The above list can serve, we think, as a partial check list to assist administrators and teachers in the analysis of their own programs for the improvement of instruction—the most manipulatable facet of the educational process.

Supervising Instruction

No one is in a more strategic position to know what is going on in a school than the principal. The only way that the principal can assess the accomplishments of how teachers teach and students learn is through actual observation in the areas where teaching and learning take place. According to J. Lloyd Trump this observation does not make the principal a dictator nor

create the "Big Brother" image. It is allowing the principal to accomplish the task and role function described as unique by Lawrence Downey in his selection, "The Secondary School Principal" (pp. 109-20). Trump concludes somebody must be watching the learning processes; it better be the principal.

SOMEBODY BETTER BE WATCHING—HERE IS WHO! *

J. Lloyd Trump

There may be an issue between Robert F. Carbone and myself, but it is not the obvious one emphasized in "Big Brother Is in the Office. . . ." I am as opposed as he is to the misuse of the school intercom system as reported in his article—and so are most truly professional principals. What bothers me are the possible connotations of the term "Big Brother," and especially what he might mean by "the unreasonable dictates of administrators." Admittedly, I have taken both expressions out of context and may be reading meanings that Mr. Carbone does not imply.

A basic question is, How does the principal supervise instruction? Or stated differently, What does he do to enhance the quality of teaching and learning in the school for whose educational improvement he is responsible? Although I have stated on numerous occasions that nowhere in the world have so many students been educated so well as in the United States, the fact remains that changes are needed to professionalize teaching and to individualize pupil learning in a dramatically changed educational setting.

If you have doubts regarding the need for supervising teachers in conventional classrooms, read carefully a stimulating, and at the same time alarming, booklet entitled *The Junior High School We Saw*.¹ The authors of that comparatively recent ASCD publication disclaim any generalized conclusions that what the 102 observers saw in eighth-grade classrooms all over the country on May 3, 1962, represented a precise description of what was going on in all classrooms. However, here are some random quotes from the summary of their report:

"The data gathered . . . seemed to cast the junior high school classroom as a miniature lecture hall inhabited by a central figure of authority and his helpless captives. . . . It does seem almost indisputably evident that the typical eighth-grade situation is teacher dominated, with pupils psychologically absent a large portion of the time. . . . There are abundant examples of both physical and psychological wandering (by pupils)

* From *Phi Delta Kappan*, September, 1965, pp. 37-39. Reprinted by permission of *Phi Delta Kappan*.

¹ John H. Lounsbury and Jean V. Marani, *The Junior High School We Saw: One Day in the Eighth Grade*. Washington, D.C.: Association for Supervisor and Curriculum Development, 1964.

and a great variety of random activity: twisting hair, biting nails, cracking knuckles, thumbing through books and papers, and the like. . . . The classrooms observed reflected clearly these kinds of instructional practices rather strikingly: (a) lecture-demonstration, (b) read-recitation, and (c) correct-explain-practice. These patterns of instruction were predominantly under the explicit direction of the teacher . . . students seemed to receive few pushes to substantiate, show causality, or project the possibilities of further application. . . ."²

My own professional experience running over three decades has taken me into thousands of classrooms the length and breadth of this country. The findings reported in *The Junior High School We Saw* do not surprise me.

During much of the past two decades I have worked actively in several programs to change schools. Today, innovations such as team teaching, independent study, large-group instruction, small-group discussion, flexible scheduling, use of teacher assistants, and the application of new technical aids to teaching and learning are all around us. The National Association of Secondary-School Principals has stimulated such developments through demonstrations, experimentation, and the dissemination of ideas. Many of you have read such NASSP publications as *Images of the Future*³ and *Focus on Change—Guide to Better Schools*.⁴ Recently we produced a filmstrip and a booklet, both entitled *Focus on the Individual—A Leadership Responsibility*.⁵

The foregoing publications point the way to an educational evolution that is occurring all over the United States and in many countries abroad. The genesis of these changes is in many proposals and developments, some from early in this century and others from a higher tempo of research studies and proposals since World War II. We know *now* how to overcome such barriers in the educational setting as having one teacher responsible for all the classroom instruction in a given subject or grade, maintaining the optimum size class for all educational purposes at twenty-five to thirty students, or believing that a subject is learned best if the student is in the classroom at the same time each day for a minimum of 200 minutes per week, and so on.

Actually, it is relatively simple to organize a school differently. Curriculum content can be arranged logically in a nongraded, continuous-progress sequence. Teachers can work in various types of teams to break the isolation of self-contained or self-sufficient classrooms. Rigid time divisions are

² *Ibid.*, pp. 52-55.

³ J. Lloyd Trump, *Images of the Future*. Washington, D.C.: National Association of Secondary-School Principals, 1959.

⁴ J. Lloyd Trump and Dorsey Baynham, *Focus on Change—Guide to Better Schools*. Chicago: Rand McNally, 1961.

⁵ J. Lloyd Trump and Lois Karasik, *Focus on the Individual—A Leadership Responsibility* (booklet). Washington, D.C.: National Association of Secondary-School Principals, 1965. (Also available in 135 color slides.)

replaced quite easily by flexible schedules; some schools even make up their schedules daily or weekly. Students can readily be regrouped into classes of 100 or more for some purposes and into other classes of fifteen or fewer for different activities. Pupils can be scheduled for extended periods of time into resource centers for independent study. Teachers can use clerks, instruction assistants, and technical devices effectively.

All of these modifications are occurring in schools. Although it takes knowledge and courage to make the changes, those are not the big problems. The challenge is for teachers to learn new instructional roles to go with the changes. Unless they learn these new roles, their teaching and the pupils' learning will be little better than what has occurred in conventional classrooms for decades.

Teaching roles, what pupils do in the learning process, and evaluation will be changed only to the extent that teachers are carefully, correctly, and constantly supervised.

THE PRINCIPAL SHOULD SUPERVISE

No one is in a more strategic position to do this supervision than the school principal. Supervisors from the central office or from the state education department can help, but they are not there all the time as is the principal and they cannot have the close working relationships that the principal can develop with the staff in the local school. Supervision by departmental chairmen can help, but that scheme too has limitations, in that teachers in a given department may not see students broadly but rather as learners of history, science, or health and physical education. Somebody has to lead, help, and check up on the instructional staff. The principal is the key person in meeting those needs.

The question is, How does the principal proceed to carry out those responsibilities? Does "Big Brother" need to use the intercom system for supervision?

Consider what principals typically do now to exercise their leadership roles. Although many teachers take a dim view of the faculty meeting as a supervisory experience, principals still seem enchanted with this device. The trouble is, many principals fail to recognize that the faculty meeting is effective only to the degree that the principal understands the potentialities and the limitations of large-group instruction. Successful large-group instruction is motivational through presenting the best teaching, is informational by providing ideas not readily available to people elsewhere, and is directional by the effectiveness of the assignments given for further discussion and study. Faculty meetings may fulfill those purposes, but they constitute only one part of the re-education system. Certainly the principal cannot know whether teaching roles are changed by what happens at a faculty meeting.

Principals also report that they do effective supervision in the faculty lounge as they discuss over coffee with teachers the problems and successes the teachers have. Such discussions are fine if they are carefully planned and if the participants are fully aware of the possibilities and limitations of small-group discussion. However, the principal cannot know whether teaching roles have changed simply by listening to teachers in the faculty lounge. Nor can he discover quality as a result of individual conferences in the principal's office or in a teacher's office.

Principals also attempt to get information about what teachers and pupils do by soliciting reports from departmental chairmen, or they get reports from listening to people who come to the office—teachers, students, or parents. Such reports are not only inaccurate at times but also give the principal secondhand information.

The only way that the principal can assess accurately how teachers teach and pupils learn is to spend a good deal of time in the places where teaching and learning occur. He visits classrooms, observes large-group instruction areas, sits in on small-group discussions, and spends time in the school's resource centers, libraries, laboratories, and other places where independent study occurs. The principal cannot visit classes by looking through the windows of classroom doors or by turning on the switch of the intercom system. Such techniques are unfair not only to teachers but to the principal himself, because he can obtain only partial evidence. He needs both to see and to hear.

Let us put to rest very quickly the observation that a principal cannot supervise because he is not an expert in all subject areas being taught in the school. Actually, he does not need to be. His expertness lies in his knowledge of the teaching-learning process, which is similar in all subjects. This writer has never visited a classroom where it was not possible to make some reasonable suggestion for improvement in what teachers did and what students were doing, simply because he accepted the obligation to be acquainted with the principles of teaching and learning that apply to all subject fields and to all age levels.

Failure to understand the meaning of democracy in supervision has rendered ineffective the work of some principals. Leaders do not stand idly by waiting until ideas slowly generate from the staff. Leaders do not attempt to treat all staff members alike, thus confusing democracy and uniformity. Leaders do not settle many matters by majority vote of the staff. Leaders do not appoint committees who waste time in pooling ignorance or in unguided discussions. On the other hand, effective leaders bring ideas to the general staff, ask questions, and listen carefully to the responses from individuals or small groups, work intensively with individuals or small groups of teachers who indicate genuine interest in innovation, create an educational setting where innovations have a chance to succeed, work untiringly to re-educate teachers so they will learn appropriate goals to go

with the changed teaching-learning situation, and help teachers to plan and conduct an evaluation that will indicate whether the changes are more successful than what had been going on before.

Does this mean that "Big Brother" needs to watch over the school? Emphatically, yes. Teachers who object to supervision or who want to create a "chalkboard curtain" around their classrooms so that no one sees them teach, those who object to faculty meetings, to assigned professional reading, and the continuous re-education on the job are in fact encouraging the unethical practices described in Mr. Carbone's article.

Casting the principal in a high professional image is the best guarantee that he will be competent to do the job. Freeing him from petty clerical, managerial, and public relations jobs can provide him with the time and energy for his most important responsibility—the improvement of teaching and learning.

Somebody better be watching. And that somebody is the school principal.

Faculty Meetings: Teacher-Principal Attitudes

The importance of the faculty meeting has been discussed frequently. However, research by Arthur Blumberg and Edmund Amidon indicates that principals perceive what transpires in the faculty meeting differently than do teachers. The principal sees his own behavior quite differently from teacher perception of his behavior. In the following selection the main points of the research are discussed.

A COMPARISON OF TEACHER AND PRINCIPAL ATTITUDES TOWARD FACULTY MEETINGS *

Arthur Blumberg and Edmund Amidon

In the September 1962 *Bulletin* the writers discussed some research they had done on the attitudes of teachers toward faculty meetings in their schools.¹ The more important findings reported were:

* FROM *The Bulletin of the National Association of Secondary-School Principals*, March, 1964, pp. 45-55. Reprinted by permission of The National Association Secondary-School Principals and the authors.

¹ Edmund Amidon and Arthur Blumberg. "School Faculty Meetings: the Teacher's Point of View," *The NASSP Bulletin*, September 1962, pp. 66-72.

1. That teachers take a rather dim view of their faculty meetings as a use of time and energy.
2. That attitudes toward faculty meetings tend to parallel more general feelings about the school and its faculty: that is, the more negative the attitude toward the faculty meeting, the more negative the feelings about the school as a whole, and *vice versa*.
3. That the critical variable accounting for differences in teacher attitudes from school to school seems to be the principal's behavior as reflected in the pattern of faculty meeting interaction, as that is perceived by the teacher. More positive attitudes are associated with faculty-centered interaction (the locus of responsibility and control being with the faculty); more negative attitudes are related to principal-centered interaction (the locus of responsibility and control resting with the principal).

The present paper reports the findings of continued research in this same area of school faculty meetings and adds a comparison of the perceptions principals have of their meetings with those the teachers have of the same meetings.

RATIONALE FOR THE RESEARCH

The most frequent and appropriate approach to the solution of problems of teaching and learning focuses on the classroom and what takes place in it. If we are to create a more effective learning atmosphere, better teaching methodology, enhanced use of teaching resources, and so forth, a great deal of research must be conducted on the classroom, on learning theory, on teacher adequacy, on teacher-pupil interaction, and on other such variables. Nevertheless, even a thorough understanding of the classroom gives only partial insight into some of the most significant problems a teacher faces. Concern needs to be directed also at those parts of the organizational structure which, though not directly connected with teacher behavior and effectiveness, may well have a significant effect on the teacher's desire and enthusiasm to do a good job and to work cooperatively. If we are to understand teaching effectiveness, we cannot consider the teacher's role in isolation from other facets of the organization in which he works.

important to investigate principals' perceptions of faculty meetings to determine the agreement or disagreement between the perceptions of principals and those of teachers. Because other studies have indicated that one's position in an organizational hierarchy affects one's attitudes toward it and its activities, it was logical to hypothesize that principals would have a set of reactions to faculty meetings different from those of teachers. The authors also expected that the "mirror-like" effect for principals would be correspondingly different.

PROCEDURES

A questionnaire similar to the one administered to the teachers in the study already mentioned—altered only slightly to make it applicable to principals—was administered to 92 principals selected at random from a state educational directory. Each questionnaire was accompanied by a letter asking for the principal's help. Seventy-four principals, 36 of them elementary and 38 secondary, completed the questionnaire.

Scale items on the questionnaire were designed to assess two different types of attitudes. Five items were concerned with the principal's perceptions of and attitudes toward faculty meetings. Three were concerned with his perception of the way in which his faculty viewed teacher-principal relations, teacher-teacher relations, and the faculty as a whole. Specifically, the questions asked were:

1. How does the principal respond to a teacher's comment?
2. How do teachers respond to the comments of other teachers?
3. How free do teachers feel to express themselves?
4. How free do you feel to express yourself?
5. What is your general reaction to faculty meetings in your school?
6. What do you think is the general condition of the faculty?
7. How close do you feel to members of the faculty?
8. How easy do you find it talking to the teacher about new ideas and suggestions for the school?

Respondents were asked to indicate their answers on a nine-point rating scale with three major positions, one located at either end and one at the center of the scale. Responses could be at any position on the scale, from one to nine. A rating of "1" represented most negative, "5" neutral, and "9" most positive. An example of an item in the questionnaire follows:

5. What is your general reaction to faculty meetings in your school?

Effective
use of time
and energy

Fairly satis-
factory: could be
improved

Waste of time:
worse than
useless

Because the earlier study of teacher attitudes showed teachers to have rather negative attitudes toward faculty meetings and what happened in them, comparison of attitudes toward faculty meetings as well as those concerned with the school in general, with those of principals, became the prime objective of the analysis of data. This comparison is presented, in abbreviated form, in the following table. It is important to note that the differences found between teachers and principals on each item are all significant beyond the .05 level of probability as indicated by the use of *t* tests.

COMPARISON OF TEACHER AND PRINCIPAL
PERCEPTIONS OF FACULTY MEETINGS AND RELATIONSHIPS

Teachers

Principals

Item I. How does the principal respond to a teacher's comments?

Teachers tend to view the principal as being relatively noncommittal or giving mixed reactions to teachers' comments in the meetings.

Principals see themselves reacting to teacher comments in a very accepting and encouraging way.

Item II. How do teachers respond to the comments of other teachers?

Teachers see their colleagues reacting slightly on the critical side to each other's comments.

Principals perceive that the teachers respond to each other in an encouraging manner.

Item III. How free do teachers feel to express themselves?

Teachers apparently think that teachers as a group are "rather careful in what they say" in a faculty meeting. A strong element of caution is present.

Principals seem to think that teachers feel a great deal of freedom to "say whatever they wish."

Item IV. How free do you feel to express yourself?

Individual teachers seem to reflect their feelings about the teacher group as a whole, as they feel that they, as individuals, are rather cautious about what they say. That is, one's own freedom is seen as limited.

Principals apparently feel free to say whatever they wish in faculty meetings.

Item V. What is your general reaction to faculty meetings in your school?

Teachers tend to react to faculty meetings as being close to a "waste of time."

The satisfaction of principals with faculty meetings is rather high. They see them as an "effective use of time and energy."

*Teachers**Principals**Item VI.* What do you think is the general condition of the faculty?

In regard to attitudes about the faculty as a whole, the results suggest that teachers view their colleagues as fairly interested in doing a good job.

In regard to attitudes about the faculty as a whole, principals perceive their faculties as being "alert, aware, and interested."

Item VII. How close do you feel to members of the faculty?

Teachers seem to see the general level of faculty relationships as being rather casual but generally cooperative.

The typical response of principals in regard to faculty relationships is that they are "very close, everyone pulling together."

Item VIII. How easy do you find it talking to the (principal) (teachers) about new ideas and suggestions for the school?

In regard to how easy they find it to talk to the principal, teachers suggest that it is rather easy "if my idea is a good one."

Principals apparently feel little inhibition about talking to teachers. Their reactions are that it is "easy for me at any time."

DISCUSSION OF RESULTS

The results of this study lend themselves to discussion both on a general and on a specific level. Generally, there is a very consistent trend for principals to perceive what transpires in their faculty meetings differently than do teachers. Further, the "mirror-like" effect discussed earlier (that is, the tendency for teacher perceptions of faculty meetings to be reflected in their perceptions of the state of the school organization) seems to hold for principals as well as for teachers.

The results clearly indicate that principals and teachers operate at different perceptual levels concerning the school and what goes on in it. This point is in agreement with much of the research that has been done concerning the effect of one's status in an organization upon his attitudes toward it. But it is not enough merely to acknowledge that differences exist and then take a "That's life" attitude. It may be precisely because of these attitudinal differences that principals and teachers experience some of the conflicts they do. For example, it has become abundantly clear in studies of industrial work groups that when communications channels become clogged—and differences in perceptions and attitudes may be largely responsible for the clogging—the consequences can frequently be seen in a lowering of morale and productivity. It is not far-fetched at all to compare industrial and school organizations. Differences certainly exist on the task

level, but on the level of organizational and interpersonal analysis and diagnosis, similarities can be expected.

An item-by-item analysis of the data in Table 1² is still more revealing.

Item I

There is a clear conflict between the way teachers see the principal behaving in faculty meetings and the way he sees himself. Time and again principals comment that they have difficulty getting teachers to discuss school problems in the meetings. Perhaps the reason lies in the teachers' perception of the principal's behavior. If they see him as relatively non-committal and sometimes critical of their ideas, they may be reluctant to talk because of their apprehension as to the reception their ideas will get. The risk apparently does not seem worth the potential returns.

What seems to be lacking is an adequate feedback mechanism. The principals see themselves as encouraging; the teachers perceive them otherwise. Evidently principals need to develop within their organizations the means by which these differing perceptions can be shared so that some semblance of objective reality can be attained. It is only when relatively common perceptions of role behavior and its meaning are held by all parties that adequate communication can take place.

Item II

Even though the focus in this item is on the behavior of teachers toward one another, the responses reveal much the same differences in perception. Teachers tend to see their colleagues reacting to one another in a slightly critical manner, while the principal sees them as behaving in an encouraging way. The question may be raised whether principals are insensitive to faculty behavior or whether their need to have things run smoothly blocks their awareness of feelings expressed in faculty meetings.

Regardless of which assumption the reader accepts, an obvious problem exists. For example, picture a meeting in which the principal brings up a problem for open faculty discussion. He expects that, since teachers react favorably to one another, productive discussion will ensue. The teachers share different feelings, and the kind of discussion he had hoped for does not materialize. The principal is disappointed. He says, "What's the use?" and he may cease to offer problems to the faculty for their consideration. The cycle becomes complete as the teachers see the principal as unwilling to discuss school problems openly with them. The end result may well be a reinforced feeling of distrust.

² *Author's Note:* Not shown. Refer to original source if further information is desired.

Items III and IV

These two items involve the question of freedom to speak as one is moved. Again there are sharp differences. Teachers feel their colleagues are rather cautious about their verbalizing; principals see teachers as being quite free to say what they please. Teachers see themselves as limited; principals see themselves as free.

Once more the picture is that of principal and teachers operating on different levels. If there were forthright acknowledgement of the differences, the problems that result would be amenable to resolution. But we have already noted the communications blockages which make the chance of open discussion of these barriers seem rather slim. In fact, it would be precisely because teachers are cautious about what they say that it would be difficult for a principal to engage teachers in discussion along these lines.

Operationally, this cautionary element of teacher behavior can create problems that may go unrecognized and result in errors either of commission or omission. Presumably decisions should be made on the basis of all facts relevant to a problem. But, because of their perceptions of the situation, teachers are not always willing to supply the facts they have, particularly if the problem is in a sensitive area of school policy. Yet the principal, who may perceive that teachers are quite free to say what they wish, makes the assumption that they have relayed all the pertinent data to him. The result is that decisions are made on the basis of incomplete information.

Once more the cycle starts to repeat itself. Teachers are confronted with what they see to be an ill-advised decision, not based on their ideas. Not feeling free enough to comment on it in public, they confine their complaints to the teachers' room out of earshot of the principal. Perceptions of the necessity for caution are reinforced, and the process starts all over again.

Item V

On this question, which deals with the perceived effectiveness of faculty meetings, there are also wide differences in the perceptions of teachers and principals. In fact, their ratings tend to cluster at opposite ends of the scale. The theme that has been evident from the start of this analysis, then, continues. Teachers and principals operate in faculty meetings with different sets of perceptions and different expectations of the same situation.

On this particular question, it is probably fair to say that an objective analysis of the effectiveness of faculty meetings would rate it between the extreme ratings of the teachers and principals. The dynamics of the situation can probably be seen as these: Principals have most at stake in faculty meetings, for they are centrally involved in the planning, scheduling, and conducting of the meetings. Because of this heavy involvement on their

part, they have a need to see their efforts as resulting in success. To see things otherwise would be ego-damaging—a circumstance generally avoided by everyone. It is much the same situation as might be found if teachers were asked whether they are doing a good job in the classroom. It is unlikely that many would perceive their efforts in a self-disparaging style.

On the other hand, teachers have feelings about the principal's behavior and the limits on their own freedom in a faculty meeting that would indicate that they find these meetings to be relatively uncomfortable. Apparently there exists what might be interpreted as a type of halo effect. Because faculty meetings produce discomfort and frustration among teachers, teachers tend to view anything associated with them—including their effectiveness—negatively.

Items VI and VII

These items are taken together because their focus is on the faculty as a whole. As was pointed out earlier, the previous research on teachers alone had given evidence of a mirror-like effect, so that teachers who reacted favorably to faculty meetings also had positive attitudes about their faculties as a whole. One could, as it were, picture teacher attitudes about their faculty by finding out how they felt about their faculty meetings.

A similar relationship seems to hold for principals; only, as the dominant theme continues, they tend to see things in a more favorable light than do teachers. That is, the more favorably the principal views his faculty meetings, the more he tends to regard his staff in a positive manner.

It must be noted that causality is not implied here. No suggestion is made that *because* principals perceive their faculty meetings as productive, they will look at their faculty in a positive way. The point is that attitudes toward one set of circumstances seem to be reflected in the other.

Item VIII

The final item for analysis deals with the idea of "approachability" of teachers and principals. While not directly connected with faculty meetings, this item was included as a further test of the trend that seemed to be so evident. The findings confirm the thread that runs throughout the results. Although teachers do not appear to be afraid to talk to the principal, an element of caution enters into their decision to engage him in interaction. In a sense, they screen their ideas and maintain only the "good ones." One might speculate that "good ideas" are those which teachers see as likely to get a favorable reaction.

A quite different feeling is expressed by the principals. They feel no barriers—either ideational or emotional—between themselves and individual teachers. This situation may be likened to that of the interaction

that goes on between teachers and their pupils. Pupils generally exercise some caution when they talk to their teacher. They need to make sure they are right or at least on the right track before they offer an opinion or ask a question. Teachers seldom feel a similar tension.

In terms of organizational behavior, the factor that deserves consideration here is that the very existence of a power hierarchy results in some degree of communication barrier between subordinates and their seniors. Personality, though related to the problem ("It's easier to talk with some people than with others") is not the sole variable in the situation, although it is often conceived as such.

SUMMARY AND IMPLICATIONS

The image of principal-teacher interaction which develops from this research suggests that schools present an organizational context in which the personnel are committed to common goals—the enhanced education of youngsters—but find themselves (sometimes overtly, but more often covertly) unable to devote all their energy to the task. They are hindered in part by communications blocks resulting from inadequate and unshared perceptions of the same interpersonal phenomena. Central issues of school concern, which should receive open and frank consideration from both principals and teachers, seldom seem to be dealt with on the appropriate levels of cognitive and emotional understanding.

If subsequent study in the area of school organizational dynamics lends support to the findings that have been presented here—and there is reason to suspect that it will—it is possible to speculate on implications of our research that go far beyond the question of whether or not faculty meetings are productive.

One such implication is related to a direction for educational research that only occasionally receives the attention it deserves. This is the research and theory that deals with the school as an organizational entity and which tries to understand the multiplicity of interacting factors that may account for the particular culture of each school. Behavioral scientists are becoming increasingly aware of the need to get a deeper understanding of the organizational context in which a person works if they are to understand the why's and wherefore's of his behavior. Much research of this kind is being undertaken in business and industry. Relatively little is being conducted in the field of education.

A sampling of questions that could be answered by the kind of research suggested would be the following: Is there a manner by which school cultures can be characterized and classified? What factors contribute to the establishment of one school culture as different from another? What are the effects of different organizational cultures on the behavior of teachers, pupils, parents?

Obviously implied in our findings is a high probability that the adequacy of the communications network existing in some schools is in serious question. It seems quite clear that the wide differences between the way principals and teachers see and feel about things is indicative of this inadequacy.

This, then, has implications for the kinds of inservice programs that are conducted in the schools. That which now passes for inservice training usually focusses on particular aspects of the teaching process or consideration of new developments in teaching methodology. Certainly, this type of training, conducted under appropriate conditions with first-rate resource people, should be continued. But it is also apparent that inservice time should be given over to what is currently defined as organizational development. Time and energy need to be expended in making each school a better functioning organization and in developing the kind of organizational culture that encourages healthy growth among teachers as well as students.

Just what are the characteristics of such a culture is a matter for future research. Our feeling is that it will be a fruitful area of endeavor.

Evaluating Administrative Internship Experiences

Another innovation with great promise to potential administrators is the internship program. Internships are made available to carefully selected potential administrators and potential doctoral candidates. The intern works with the school principal and is frequently involved in innovational activities. The internship is viewed primarily as a learning experience for the intern. Service to the school system, though invariably substantial, is incidental. In the following selection, the American Association of School Administrators suggests guides and techniques for evaluating the intern and his experience.

A TECHNIQUE FOR EVALUATING ADMINISTRATIVE INTERNSHIP EXPERIENCES *

Clarence A. Newell

This article presents a technique for evaluating and re-directing internship experiences in educational administration and supervision. The devices described have been developed over a period of nearly twenty years in an

* FROM "Leadership Training Programs—A Technique for Evaluating Administrative Internship Experiences" by Clarence A. Newell, December, 1965, pp. 1-11. Reprinted by permission of the American Association of School Administrators.

actual internship program. It is believed that these devices are consistent with generally-accepted principles of evaluation.

Three types of evaluation are needed: 1) continuous evaluation of the internship experiences at the time when they are actually going on; 2) evaluation of the intern and of the intern's growth; and 3) evaluation of the internship program through follow-up studies, comparative studies, and the like. This article is directed to a consideration of the first of these types of evaluation. By implication, it deals also with the second type. The third type is definitely outside the scope of the present article.

NATURE OF THE INTERNSHIP

Because specific evaluation devices are meaningful only in relationship to a specific program, it is necessary to describe briefly the internship programs in which these devices are used. These internships in educational administration and supervision are made available to carefully-selected potential doctoral candidates, all of whom have completed a master's degree and preferably two years or more of graduate work. Each intern spends two full semesters in an internship: during one semester, an intern typically works with a school principal in an individual school; during the second semester, the intern has a broader type of experience—including administrative activities such as work at different educational levels (elementary, junior high, and senior high school), work on curriculum committees, visits to meetings of the Board of Education, work in various divisions of the school superintendent's office, visits to experimental programs in other school systems, a day each at the National Education Association and the U.S. Office of Education, and attendance at the national convention of a professional association. Each intern is paid a regular teaching salary.

An internship is viewed as being primarily a learning experience for the intern. Service to the school system, though invariably substantial in a good internship, is incidental. Full administrative responsibilities are delegated to each intern to the extent feasible.¹

THE INTERNSHIP GUIDE

The evaluation of the internship experience is based upon a Guide prepared by each intern to give direction to his own internship experience. Because each Guide is unique, each internship evaluation is unique. The main part of each Guide consists of a listing of purposes which an intern

¹ See also Newell, Clarence A. *Handbook for the Development of Internship Programs in Educational Administration*. New York, N.Y. Cooperative Program in Educational Administration, Middle Atlantic Region, May, 1952.

hopes to accomplish during the course of an internship, together with some suggested activities for accomplishing these purposes.

A tentative Guide is prepared first by the intern, and is then reviewed and revised in consultation with the university professor and with staff in the school system. The Guide must be developed around the role of the administrator, yet the role must be expressed in relation to an intern's interests and past experiences if the Guide is to be most useful in providing direction for an internship experience.

The major areas included in one of the Guides are as follows: I) Curriculum; II) Personnel Administration (Pupil and Staff); III) Supervision; IV) School-Community Relations; V) Organization and Management; VI) School Plant, Equipment, and Supplies; VII) Finance and Budget; VIII) National and State Organizations; IX) Research; and X) Evaluation. In addition to the task areas listed, we are currently experimenting with using the elements of process (as expressed in the various theories of administration) as a basis for planning and evaluating internship experiences.

For each area of the Guide, appropriate purposes and sample activities are then listed, as for example the following:

I. Curriculum and Programming²

A. Curriculum Construction

Purposes:

1. To become familiar with the background, information, influences, and objectives of curriculum construction.
2. To gain skills in practical methods of curriculum construction.
3. To learn the principal's role in curriculum construction.
4. To learn the legal aspects of the curriculum.

Examples of Possible Activities

1. Review materials available on curriculum construction.
2. Discuss curriculum with people who are now working on it.
3. Work with groups which are engaged in curriculum study and evaluation.
4. Become familiar with course offerings of individual schools.

THE EVALUATION PROCESS

The *process* used in evaluating an internship program has been described elsewhere.³ Briefly, each intern is seen twice each month; once at the place

² From the Internship Log of Kenneth E. Huff.

³ Newell, Clarence A. "Planning and Evaluating Internship Experiences in Educational Administration." *The Journal of Teacher Education*, Vol. 7, No. 2, June, 1956, pp. 159-166.

where the internship is taking place (an individual school or central office division); and once in an internship seminar. The evaluations take place at these sessions. Those present include the intern, university professor, director of in-service education and/or the assistant school superintendent, and administrators who are currently working with the interns. Although the sessions are cooperatively planned in advance in general terms, the intern takes the lead in preparing the specific agenda, and in preparing and presenting appropriate materials for consideration by the group. In addition to these sessions, informal evaluation by the intern and the sponsoring administrator takes place frequently.

THE INTERNSHIP LOG

In order to provide a continuous basis for evaluation, each intern keeps a running Log of his internship experiences. This Log is a rather extensive record of the entire internship. Secretarial service is made available for the keeping of the Log, and by the end of the year it may well be a document about an inch thick, with single-spaced typing on regular-sized typing paper. The Log is invaluable as a basis for evaluation. Entries are made in the Log on the basis of the following criteria:

1. The Log should be a complete written record of the internship experience. In addition to the record of daily activities, it should include the intern's Guide, the agenda for all internship conferences and seminars, all materials pertaining to evaluations of the internship experiences, and a summary of outcomes.
2. Routine experiences or functions at a low professional level need not be written in detail but should show the elapsed time involved.
3. Activities at a high professional level or those describing specific administrative skills which the intern wishes to remember should be recorded in greater detail.
4. Following the record of each different activity in which the intern engages should be a section devoted to comments, interpretations, or evaluation regardless of the amount of time the activity required.
5. The record should be objective; subjective elements should be so designated.
6. The record should include a description of techniques which would be useful to an administrator performing a particular function.

After the Log has been written, an appropriate code number is entered in the margin beside each entry in the Log in order to identify the experience with the corresponding purpose in the Internship Guide.

The way in which code numbers are developed can easily be understood by reference to the Frequency Tabulation shown in the next section of this

article. Thus, the code number "I-A" is used to designate Curriculum Construction; and the code number "VI-B-1" designates Opening School Activities. In similar manner, each of the other items is identified by the corresponding number and letter designation in the outline, and this designation is the code number.

FREQUENCY TALLY

The first and most simple evaluation device is the Frequency Tally. This tally shows the number of experiences which an intern has had in each of the areas listed in his internship Guide. (A good estimate of the amount of time devoted to each activity can readily be determined if the Log includes a record showing an intern's major activity during each half hour of the day.) The frequency tally shows quantity, but not quality. It is useful in calling attention to areas being neglected in the internship. When a frequency tally reveals that an intern has had no experience in relation to one of the purposes in the Guide, provision can then be made for experience in that area, or a decision may be made that the purpose listed should be revised or eliminated from the Guide.

The frequency tally is prepared monthly on the basis of the code numbers which have been entered in the margin of the Log.

Following is an example of a frequency tally. (For each heading shown in the tally, a purpose is shown in the Internship Guide.)

FREQUENCY TALLY OF INTERNSHIP EXPERIENCES ¹

<i>Number of Experiences</i>	<i>Areas of Experience</i>
<u>39</u>	I. Curriculum
<u>4</u>	A. Construction
<u>9</u>	B. Courses of Study
<u>4</u>	C. Instructional Aids
<u>22</u>	D. Extra-Curricular Activities
<u>139</u>	II. Pupil Personnel Administration
<u>0</u>	A. School Census
<u>33</u>	B. Pupil Accounting
<u>26</u>	C. Guidance Services
<u>2</u>	D. Special Services
<u>8</u>	E. Health Services
<u>59</u>	F. Discipline
<u>11</u>	G. Other

¹ From the Internship Log of Calvin A. Blatt.

*Number of
Experiences**Areas of Experience*

<u>78</u>	III. Staff Personnel Administration-Policies and Practices
<u>5</u>	A. Selection
<u>11</u>	B. In-Service Training
<u>8</u>	C. Evaluation
<u>6</u>	D. <i>Transferring</i>
<u>0</u>	E. Promotion
<u>23</u>	F. Assignment of Responsibilities
<u>0</u>	G. Dismissal
<u>5</u>	H. Morale
<u>15</u>	I. Professional Organizations
<u>5</u>	J. Other
<u>161</u>	IV. Supervisory Practices
<u>80</u>	A. Classroom Visitation
<u>33</u>	B. Individual Conferences
<u>2</u>	C. Group Conferences
<u>6</u>	D. Evaluation
<u>2</u>	E. Workshops
<u>38</u>	F. Other
<u>42</u>	V. School-Community Relations
<u>12</u>	A. Public Relations
<u>21</u>	B. School-Oriented Public Organizations
<u>1</u>	C. School-Community Resources
<u>1</u>	D. Student Placement Services
<u>1</u>	E. Adult Education
<u>6</u>	F. Youth Groups
<u>231</u>	VI. Organization and Management
<u>91</u>	A. Central Office
<u>13</u>	1. Board of Education
<u>17</u>	2. Superintendent
<u>13</u>	3. Assistant Superintendent
<u>5</u>	4. Director of Personnel
<u>10</u>	5. Director of Secondary Education
<u>7</u>	6. Directors of School Facilities and Finance
<u>6</u>	7. Director of Supporting Services
<u>20</u>	8. Other

<i>Number of Experiences</i>	<i>Areas of Experience</i>
<u>7</u>	6. Guidance Program
<u>1</u>	7. School Finance
<u>2</u>	8. Curriculum Construction
<u>12</u>	9. In-Service Program
<u>3</u>	10. Closing School Activities
<u>24</u>	11. Other
<u>8</u>	VII. School Plant, Equipment, and Supplies
<u>2</u>	A. Acquisition and Maintenance of Building
<u>3</u>	B. Acquisition, Distribution, Maintenance and Use of Equipment
<u>3</u>	C. Acquisition, Distribution and Use of Supplies
<u>18</u>	VIII. Finance and Budget
<u>17</u>	A. Development of County School Budget
<u>0</u>	B. Source of School Financial Support
<u>1</u>	C. Individual School Financial Activities
<u>0</u>	D. Necessary Legal Financial Obligations
<u>44</u>	IX. Research
<u>1</u>	A. Recognition of Significant School Problems
<u>15</u>	B. Methods of Organizing the Research Project
<u>28</u>	C. Conducting Research
<u>0</u>	D. Action Research
<u>26</u>	X. Evaluation
<u>15</u>	A. Agenda for Internship Seminars
<u>8</u>	B. Agenda for Internship Conferences
<u>3</u>	C. Personal Evaluations

ANALYSIS OF RESPONSIBILITY LEVEL, PROFESSIONAL LEVEL, AND VALUE

Because an intern needs the experience of carrying real administrative responsibilities if he is to learn to become a competent administrator, analysis is made each month of the level of responsibility which he carries in each internship experience. This analysis is developed on a chart consisting of a piece of paper on which both horizontal and vertical lines are drawn. The chart for a four-week month consists of sixteen rectangles. Dates are entered along the base of the chart so that entries in each column are for a specific week. The horizontal lines delineate four rows on the chart to show four degrees of responsibility, as follows: 1) Full Responsibility—intern carries full responsibility normally delegated to school of-

*Number of
Experiences**Areas of Experience*78

III. Staff Personnel Administration-Policies and Practices

5

A. Selection

11

B. In-Service Training

8

C. Evaluation

6

D. Transferring

0

E. Promotion

23

F. Assignment of Responsibilities

0

G. Dismissal

5

H. Morale

15

I. Professional Organizations

5

J. Other

161

IV. Supervisory Practices

80

A. Classroom Visitation

33

B. Individual Conferences

2

C. Group Conferences

6

D. Evaluation

2

E. Workshops

38

F. Other

42

V. School-Community Relations

12

A. Public Relations

21

B. School-Oriented Public Organizations

1

C. School-Community Resources

1

D. Student Placement Services

1

E. Adult Education

6

F. Youth Groups

231

VI. Organization and Management

91

A. Central Office

13

1. Board of Education

17

2. Superintendent

13

3. Assistant Superintendent

5

4. Director of Personnel

10

5. Director of Secondary Education

7

6. Directors of School Facilities and Finance

6

7. Director of Supporting Services

20

8. Other

140

B. Individual School

15

1. Opening School Activities

19

2. Master Schedule

14

3. Distribution of Staff Responsibilities

9

4. School Plant, Supplies, and Equipment

34

5. Records and Reports

ANALYSIS OF LEARNINGS

In order to provide further analysis of the quality of the experience, and also as an aid to planning, each intern prepares each month in outline form, an analysis of the learning experience to cover the following points:

1. Strengths and weaknesses of the experience
 - a. What I felt was best in the experience
 - b. What I felt was weakest in the experience
2. What I learned and did. A list of—
 - a. Skills acquired
 - b. Understandings which have deepened
 - c. Services rendered
3. What I wanted to learn and did not learn
4. Direction I would like the internship to take the next month.

The foregoing analysis not only provides for evaluation of the learning experiences, but provides also a basis for re-direction of the internship experience as needed.

The lists of skills, understandings, and services are cumulated so that by the end of the year, a complete listing of these items has been developed. The lists of skills and understandings are designed to summarize the learnings of the intern, and the list of services rendered provides useful evidence in interpretation of the program.

At the end of the internship experience, each intern prepares also a brief narrative summary of the major learnings which he has achieved through the internship.

EVALUATION OF THE INTERN

Although the evaluation devices center on the learning experiences, they result also in a thorough-going analysis of each intern. The extent of the intern's competence is clearly reflected in the various analyses, and in the thoroughness and ingenuity with which he prepares for each evaluation session.

In addition, there is a final evaluation session for each internship devoted specifically to evaluation of the intern. At this session, persons who have worked with the intern—principals, supervisors, central office directors, and one or two teachers—meet with the coordinators of the program to discuss the intern's strengths and weaknesses. This session is the only evaluation session from which the intern is excluded. After the

ficial; 2) Limited Participation—intern makes recommendations for action, and checks periodically with school officials; 3) Observation—intern takes no active part in work; and 4) Discussion—orientation of and explanation to intern.

For each entry in the Log, the intern makes a judgment, and then enters a symbol on the chart. Although a simple tally may be used for this purpose, several different symbols are usually used, or the tally marks are made in different colors, in order that two additional analyses, described in the remainder of this section, may be shown on the same chart.

A second type of analysis concerns professional level. In some of the early analyses of responsibility level, it was discovered that an intern could proceed to "Full Responsibility" very quickly if he were assigned to perform strictly clerical or custodial tasks. For this reason, it is desirable that the analysis include also a differentiation between experiences at a High-Professional Level, those at a Low- or Semi-Professional Level, and those at a Clerical or Non-Professional Level.

Still another analysis considers Value of the experience to the intern. (Great Value; Some Value; Little or No Value). The analysis of Value by each intern is subjective but is useful as an indication of the intern's perception of the experiences he is having.

QUALITY ANALYSIS ON SPECIFIC PURPOSES

An analysis of quality of the experience with reference to any one of the specific purposes is undertaken in depth from time to time as seems warranted. Since for each experience described in the Log there is entered in the margin of the Log a code number to identify the purpose to which the experience presumably contributes, all of the experiences which relate to a specific purpose can readily be identified.

From time to time, it seems desirable to conduct a probing evaluation of the experiences relating to a specific purpose. It is a simple matter for an intern at an evaluation conference to identify quickly all the experiences with reference to a particular purpose, and to read the appropriate entries in the Log. The experiences can then be discussed and analyzed by the participants in the evaluation session.

If such an evaluation is desired for a number of different purposes in the Guide, the intern, in advance of the evaluation session, can prepare for each purpose, a sheet with a one-sentence summary of each relevant entry in the Log, and these summaries can then provide the basis for discussion and analysis. Each one-sentence summary can be accompanied by the appropriate date of the activity, and the more complete description of the activity can then be located quickly in the Log whenever desired.

EDUCATION AND G-A-R-B-A-G-E COLLECTION *

Howard B. Holt

Some years ago when I was the principal of a small school I had occasion to visit a large senior high school enrolling more than 2,000 pupils. I was to talk to the principal about some professional matters and was rather looking forward to seeing a real educational leader in action, one whose day would be filled with high-level discussions and decisions on vital matters affecting his large clientele. Upon arrival I discovered the principal engaged in one such task—he was counting the receipts from the football game of the preceding weekend. A brief conversation on the subject revealed that this was his usual Monday activity and that he considered it quite within the reasonable range of his duties.

Whether it be counting football receipts, choosing the proper brand of floor wax, or plotting convenient bus routes, the school administrator has frequently found himself spending large portions of his time on activities that seem to have little to do with learning. What has been lacking is a convenient means of describing all this. May I suggest that the phrase "germane and recurring basic administrative generalities in education" would readily do the job? Since this is a bit difficult to remember, it might be helpful to reveal that the initial letters of the key words form the acronym "GARBAGE."

Lest one's sensibilities be offended (especially if your job consists mainly of handling GARBAGE) let it be remembered that disposal of waste materials is an important function in any society. It has been said that if all one knew about a civilization was how the sewage system was set up, an accurate estimate could still be made of the relative state of advancement. It may also be pointed out that with the sophisticated systems of handling waste products, positive benefits accrue in the return of the material to useful forms—land fill and fertilizer, for example. The analogy becomes valid as applied to schools when one realizes that floor wax and bus routes and football game receipts, irrelevant as they may seem, do make a contribution to the major objectives of schools and hence are considerations of some weight.

An attempt to list some of the activities in schools that could be called GARBAGE is difficult—one man's GARBAGE may be another's pride and joy—but here are some aspects of schools on which professional people spend time and effort:

* FROM *Phi Delta Kappan*, February, 1966, pp. 322-323. Reprinted by permission of *Phi Delta Kappan*.

group has evaluated the intern, however, the group's findings are interpreted to him.

Following the session, a letter is drafted to summarize the group's findings, and copies of the letter are placed in the intern's file in the School System and the University.

SUMMARY

The devices described constitute a technique for evaluating and replanning an on-going internship experience. They help an intern to assess his own needs and growth. They enable the coordinators of a program to help provide direction for an experience in a manner consistent with sound principles of learning, and enable them to appraise an intern's professional competence and promise. Although the devices require some of an intern's time, they are not so time-consuming as to stand in the way of the actual administrative and supervisory experiences, which are the essence of a sound internship.

A technique of evaluation such as the one described is essential if an internship experience is to realize fully its potential effectiveness as a means of professional education.

Improving Management

There are many ways in which the principal can improve his management structure and program—such as adopting time-proved business practices, purchasing and using new time-saving equipment, and organizing his time for more effective utilization. Only five selections are presented in this chapter. With the exception of the first selection, on organization of priorities, all the selections are on the "cutting edge" of new management possibilities.

Organization and Task Priorities

The task of the school principal and the manner in which he spends his time were discussed in an earlier chapter. In addition, the unique task of the secondary school principal and the improvement of curriculum and instruction were presented. The purpose of the following selection by Howard B. Holt is to dramatize the point that many of the time-consuming tasks of the principal are peripheral to his central task and should be delegated or eliminated. Holt labels these tasks "GARBAGE" and states that the principal should recognize these tasks for what they are even though he may continue to do some collecting.

actually spent working directly with teachers and the curriculum and how much goes into GARBAGE collection. (Harold McAbee's study reported in the March, 1958, issue of the *Bulletin of the National Association Secondary-School Principals* is a good example.)

At least two reasons suggest themselves to explain wherein administrators have gone astray. The first of these is wholly legitimate. It is a major function of administration to do the very job of GARBAGE collection that has been decried. The details of operating a school system should be managed as efficiently as possible to the end that there is the least possible interference with the vital teaching-learning function. Here one can argue that an apparently inordinant amount of effort on the part of the administration would mean, ideally, that teachers would be freer to teach.

The second reason for excessive administrator concern with the less essential may well be in the common career path of, especially, the secondary principal. Rarely does the administrative officer of a sizable school move directly from the classroom to the top job. Rather, he will typically spend from five to twenty years doing discipline, counseling, scheduling, public relations, and a host of other necessary duties significantly removed from the classroom. It is not surprising, then, that he is inclined to view the peripheral as the central, or at least to perform that way, since this has been his most recent experience. It too often follows that what the boss appears to regard as important becomes important to everyone in his employ.

A simple answer to the basic problem posed here does not exist. Demands of the society in which the school operates will continue to impinge. Some hope may come in a rather drastic internal reorganization of schools which would place many of the non-teaching duties in the hands of clerical personnel. Career paths might well be deliberately changed to shorten the time between classroom teaching and top administration—or even to make it concurrent. Direct teacher involvement through the device of a faculty council or senate might increase the influence of those in the classroom and serve to keep the school's emphasis where it properly belongs. All of this, however, would depend on a renewed commitment to learning as the reason for the existence of schools and a constant restatement of this philosophy to maintain its vitality.

Daily Rescheduling of Students

In the early stages of flexible scheduling, time was not a major consideration. However it is a major consideration to Glen F. Ovard and M. Rex Arnett. To them time should become a tool of the teacher and student to aid in the learning process and to provide daily flexibility for program planning and

1. Selecting a queen for the (fill in the blank) Festival.
2. Explaining to a parent why her daughter was not selected for the above.
3. Providing a program (any program) for the noon meeting of Kiwanis.
4. Explaining to the program chairman why this can't be done every week.
5. Approving cafeteria menus.
6. Explaining to a parent why fish is always served on Friday.
7. Deciding which of two teachers gets a favored corner room.
8. Explaining, etc.
9. Refereeing a fight (after the fact).
10. Listening to the band director explain why the band must be excused sixth period.
11. Listening to the English teacher explain why the band must *not* be excused sixth period.
12. Setting up the booth for the PTA carnival.
13. Tearing down the booth for the PTA carnival.
14. Lecturing the children in your school about proper care of rubbers, raincoats, and mittens.
15. Defending yourself against the parent who believes you are responsible for the loss of rubbers, raincoats, and mittens.
16. Explaining to the president of the Quarterback Club why the star halfback (his son) won't play tonight (four "Fs" and a truancy).
17. Listening to the local merchant explain why all purchases should be made in the community (even if the cost is 20 per cent higher).
18. Listening to the president of the Taxpayers Association explain why school costs must be cut (same man as above).
19. Counting the receipts after a football game.
20. Etc.

A considerable debate might be held about the relevance of each of the above items or about any similar list one might construct. But the point remains that there are very many things that seemingly must be done, that require the expenditure of time, talent, and money, but that are only slightly connected with the only important business of schools—instruction.

One cannot argue successfully that all such GARBAGE should be eliminated from the schools, although much could be. The peripheral concerns will continue to be with us under the most rigid of policing. The more pervasive danger, however, is that schools and especially administrators become so involved in the less essential details that the main functions become obscure. For example, school principals queried in a number of studies have uniformly declared that instructional improvement is their most important function. Yet these same studies reveal how little time is

the perfect unit of time for all lectures, discussions, movies, tests, and other activities. For many decades, educators have wished for some way to fit the quantity of time to the teaching-learning activity being planned. But the mechanics of such scheduling have been prohibitive. Not until the advent of the computer has the needed scheduling flexibility been possible.

THE DAILY DEMAND COMPUTER SCHEDULE (DDCS)

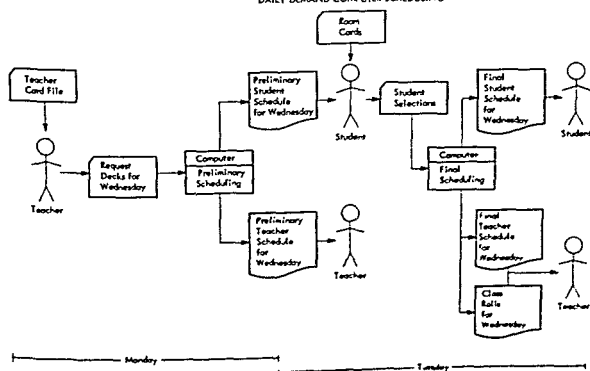
In Daily Demand Computer Scheduling, teachers submit request for students. They may request any or all of the students enrolled for a particular course, and several requests may be submitted for each course. Each request, along with specifying which students are wanted, also indicates how much time is desired. Further, a teacher may specify precisely when and where he wants the group to meet; but normally he will let the computer select a time and place so fewer conflicts will be created with other teachers' requests.

All such requests are then submitted to the computer. The computer resolves the conflicts and prepares schedules for students and teachers.

MECHANICS OF DAILY DEMAND COMPUTER SCHEDULING

The following chart illustrates the mechanics of Daily Demand Computer Scheduling as it is being developed at the Brigham Young University Laboratory School:

DAILY DEMAND COMPUTER SCHEDULING



individualized analysis and prescription. Daily Demand Computer Scheduling (DDCS) as developed in the Brigham Young University Educational Experimental Programs and Laboratory School provides this daily flexibility through the use of a planned computer scheduling system. A résumé of the operational plan as well as typical student questions about such a scheduling program are presented in the next selection.

DAILY DEMAND COMPUTER SCHEDULING (DDCS)— A NEW UNIQUE SCHEDULING PROGRAM *

Glen F. Ovard and M. Rex Arnett

WHY A NEW SCHEDULING SYSTEM IS NEEDED

A new scheduling system is needed because teachers need greater flexibility in program adjustment. Time should become a tool of the teacher. Some examples are cited below:

The high school's U.S. history teacher would like to bring all four of his history classes together at one time for a 45 minute civil war film. The home economics teacher needs 30 minutes for her girls to mix their cake batter. She doesn't want them while the cake is cooking but does want them back to sample their wares and clean up. An algebra teacher has five students who are having difficulty grasping some new concepts. He believes that in a short tutoring period he could get them over this difficulty. The band teacher would like to practice his brass section but doesn't need the whole band waiting while he does it.

Unfortunately, these teachers and all other teachers have no such flexibility. They are limited to a typical, standard 55 minute period, and in each period they must teach the same set of students every day. The history teacher must sit through the same film 4 hours instead of 1. The girls in the home economics will mix their cakes today, cook them tomorrow and taste them the day after tomorrow, while the algebra teacher must continue to "snow" his slow students or "bore" his fast ones.

Although there is more flexibility in the continuous progress programs, the need for daily regrouping of students for various activities is a necessity for maximum instructional improvement.

There is need for variable length of teaching periods which can be changed day-by-day as required by teachers and students. Traditionally, we are all used to fixed-length periods. However it is illogical to assume 55 minutes is

* FROM "Daily Demand Computer Scheduling (DDCS)—A New Unique Scheduling Program," by Glen F. Ovard and M. Rex Arnett, Education Experimental Programs, Brigham Young University. Reprinted by permission of the authors.

made according to the "demands" for instructional time or in other words according to the actual need for time. The scheduling process is handled by a high-speed computer which makes it possible to solve the complex problem of resolving all scheduling conflicts. By the way, since Daily Demand Computer Scheduling is a long title, we will just refer to it as DDCS from now on. O.K.?

But doesn't the present schedule include large classes, small classes and provision for independent study in the library or study hall?

Granted we have some classes that are small, some that are large, and a number of our students are enrolled in individual study. But those groupings cannot change daily according to current needs. Small groups must stay small, etc. We could increase our efficiency if we had control not only over the size of instructional groups, but over the length of time the class meets and in being able to call groups of students together who share a common learning problem.

Does DDCS give such flexibility and control?

Definitely yes. A teacher decides what lesson or what concept needs to be taught, then estimates how long it will take to teach it. (He may need, for example, only a few minutes to review a quiz or present a short demonstration. On the other hand, on occasion he will need large blocks of time—maybe even up to two or three hours for a field trip or to perform an experiment.) The students who need to receive that particular lesson are identified and a request for those students is submitted to the computer. They are then scheduled in such a way as to avoid conflicts with their other classes and activities.

Will all of the teaching be done in small groups?

No. One of the advantages of DDCS is that large groups can be scheduled all at one time. For example, a teacher who teaches five separate social studies classes could schedule all of his students in all five classes at one time to see a film. The teacher then would only have to take time to show it one time instead of five separate times as he does in a traditionally scheduled school.

With the use of a computer, don't all of the students become just numbers instead of individuals?

The computer should be thought of merely as a tool. It enables us to do many necessary things much faster than they could be done otherwise, just as do automobiles, typewriters, ditto machines and printing presses. It can do nothing unless it has been properly prepared by a well-thought-out computer "program" which is worked out in advance by experts. Also, it can only process the data submitted to it by teachers and while the computer can more conveniently work with numbers, it should be remembered that the

As may be seen from the chart, the teacher prepares his requests from prepunched IBM cards in his "TEACHER FILE." These cards allow him to specify which students he wants, how much time is wanted and other facts about his request. The request decks from all teachers are submitted to the computer, and it prepares preliminary schedules. All this is done two days in advance. As the chart illustrates, requests for instructional activities on Wednesday are submitted to the computer on Monday.

On Tuesday morning in a home room period both students and teachers receive their preliminary schedules for Wednesday. However, not all periods may be requested by teachers. Therefore, the student selects how he will spend his unscheduled time from the alternatives available to him. He indicates what he will be doing implicitly by selecting a room card which carries a course or independent study designation for each of his unscheduled periods. Tuesday he uses "ROOM CARDS" in making his "STUDENT SELECTIONS" to complete his schedule. These cards are submitted to the computer which then prepares each student's final schedule as well as class rolls. Tuesday afternoon, these are available so that both students and teachers know precisely what their Wednesday schedules will be. Wednesday morning the student goes to classes as scheduled for that day.

Questions and Answers from a Student's Viewpoint

What is flexible scheduling?

Flexible scheduling refers to a number of different programs being tried across the country in order to increase the efficiency of our schools. It has been found that many of the problems of learning can best be met when the schedule is flexible enough to allow for small group instruction, large group instruction and independent study in variable blocks of time rather than a rigid schedule which requires that all classes and all students meet regularly for the same length of time.

What is the difference between flexible scheduling and Daily Demand Computer Scheduling?

Flexible scheduling is a general term applied to a number of different programs being tried across the country. In a sense it can also be applied here at B. Y. High since our experiment involves scheduling. However, we prefer to call our program *Daily Demand Computer Scheduling* to distinguish it from other flexible scheduling programs and because we feel this term is more descriptive of our program.

Why is it felt that "Daily Demand Computer Scheduling" is more descriptive?

First of all, it indicates that the scheduling will take place on a daily basis rather than on a yearly or semester basis as in certain other flexible scheduling programs. The word "demand" indicates that the schedule is

How do I complete the preliminary schedule?

The preliminary schedule will show times and courses that the computer has scheduled for you. If you still have unscheduled periods you may choose certain optional activities such as library, independent study, language laboratory, other learning laboratories, or your scheduling group teacher may require you to schedule study time in a specific subject in which you need to spend more time.

Do I write out what I intend to do with my unscheduled time on my preliminary schedule?

Yes, one of your scheduling group teachers will have to approve your schedule before it is finalized, however. As a student you should know best where you can spend your extra time most profitably. Those students who do not make wise choices will have the privilege of selecting how to spend their extra time limited or revoked. In such cases the teachers will submit instructions to the computer which will result in that student's schedule being completely filled in by the computer.

Do I have to schedule something in all of my unscheduled periods?

Yes, by all means! But as indicated above, there will likely be times when you will be able to choose from several optional activities, including independent study.

What about my lunch period? How is that scheduled?

The computer automatically leaves you at least two periods between 11:30 a.m. and 1:00 p.m. to schedule for lunch. If the computer leaves you more than two periods, you will choose the specific two and write "lunch" on your schedule.

Then not all of the students will go to lunch at the same time?

That is correct!

How does the preliminary schedule become finalized?

The preliminary schedule comes to you one day before it is used. It becomes finalized by (1) your writing in how you will use your unscheduled time; (2) the scheduling group teacher approving your choices and initialing your schedule; (3) the central office making any necessary changes or writing in any modifications on your schedule and notifying you or your scheduling group teacher. The central office will rarely change your schedule, but occasionally it does become necessary to make some minor adjustments. After your scheduling group teacher approves your schedule it is finalized and the next day you will follow it as outlined.

How will DDCS benefit me, as a student?

By providing you with the opportunity to receive instruction in smaller groups where students are sharing common learning problems. Thus the teaching can be more individualized. It will also give your school day more

teacher bases his requests on the *individual* needs of students. In fact, more individualized instruction is possible than ever before under this system.

Do you mean that I will be given individual tutoring by my teacher?

It is likely that your teacher will occasionally call you in alone to help you with problems as necessary. Furthermore, graduate assistants or assistant teachers will be available to help you as you study. The teacher will mainly try to identify those students who are having the same type of problems and call them as a group for help. It will be possible also for you to see your teacher for special help because this new program provides a *Consultation* time when teachers are available to work with students.

How will I know when teachers are available for consultation?

The teachers' consultation times will be posted daily in a bulletin which you receive in your scheduling group meeting.

Won't the brighter students get all the attention?

No! Our program is designed to better fulfill the needs of *all* students. No longer will the advanced student be bored while the teacher covers material geared to the average student. Probably more important though is the fact that students who are having trouble or who are absent or whose background is sparse will not have the hopeless problem of getting further behind as the rest of the class keeps moving ahead. Students who need to take longer with certain lessons can do so as long as such a privilege is not abused by laziness and procrastination.

Won't classes meet at the same time every day?

No. As the computer compiles teachers' requests every day, it might, for example, schedule your German class in the morning one day and in the afternoon the next day. You might also have a class for 25 minutes on one day and for 40 minutes the next, according to the actual time the students need to master the lessons for a particular day.

How will my parents be able to contact me in case of an emergency, if my schedule is different every day?

A duplicate copy of your current schedule is kept in the office and any student can be contacted immediately anywhere on our campus. Incidentally, teachers' schedules are also kept on file, so they may be reached immediately whenever necessary.

What will we do in the scheduling groups?

Each scheduling group will consist of from 26-30 students under the direction of two teachers. Attendance check and regular home-room business will be conducted and students will receive and complete the preliminary schedules for the following day. They will also check over the final schedule to be followed that day when the scheduling group is dismissed at 8:25.

It is called PERT, the most exciting management tool to evolve in recent memory.

PERT is the military's acronym for Program Evaluation and Review Technique. Its civilian counterpart has been dubbed "Critical Path Method," a name which comes from a feature of PERT.

PERT is deceptively simple, or as the Navy notes, "less novel than the execution of approach." Essentially, events that must take place to meet a target date are tied together sequentially by the estimated times it takes to move from one event to another. Progress, or the lack thereof which affects the program, is computed by electronic data processing and then made graphically available for all to see and act upon. The process is continually updated to reflect change, trouble, potential trouble and achievement. The approach is repeated until the project is completed—on time.

It is less than four years now since the Navy's Special Projects Office, under the command of then Rear Admiral William F. Raborn, Jr., introduced PERT to its Fleet Ballistic Missile System program, as the Polaris effort is called more properly. In this short time, PERT—and all the variations upon its theme—has infected managers and super-managers throughout government and industry.

The Navy is applying it to other research and development programs; the Army to its Nike-Zeus anti-missile; and the Air Force to its Skybolt air-launched ballistic missile. The National Aeronautics and Space Administration is considering PERT for Apollo, the nation's projected three-man expedition to the moon; the Federal Aviation Agency for development of a supersonic transport; and the Post Office Department for developing equipment to automate the handling of mail.

It is only a matter of time, say prognosticators along the Potomac, before all major defense and research and development contractors for the Government are involved in PERT on a mandatory basis.

Many defense contractors—already aware of the portents—have joined the parade. Other firms, most notably the electronics and construction industries, are using a part of PERT and calling it the critical path method. One builder predicts that all large construction jobs will be "PERTed" by 1970.

PERT is being taught at the Harvard Business School and elsewhere. It is the subject of a best-selling film. And a \$130, five-day lecture course on PERT has been playing to full houses.

WHY PERT IS POPULAR

PERT's popularity is attributable to the success of the Fleet Ballistic Missile program itself—an epic effort that put the first Polaris missile submarine on station nearly three years ahead of the original target date.

variety and provide you with opportunity for independent and self-instructional study time. If you participate in a special activity, you will not usually be missing another class. If you are absent or behind, your teacher may schedule you in for make-up sessions. Eventually some students will be able to carry a more challenging and enriching class load and will no longer face the inevitable difficulty of having to choose between taking Band, for example, and German since under DDCCS it is more likely that the student would be able to take both. These are just a few of the more obvious advantages which are apparent. It is felt that the overall program will benefit you greatly in many other ways also.

PERT: A New Management Technique

One of the most recent new management techniques is Program Evaluation and Review Technique (PERT). The method was designed by the Navy's Special Projects Office for the control of the program that developed the Polaris missile. Primarily a business management tool, it is currently an innovative technique in educational administration. The selection that follows shows how PERT can be used by the administrator.

PERT: HOW TO MEET A DEADLINE *

Howard Simons

As it has done many times in the past few years, the staff of the Navy's Special Projects Office in Washington, D. C., recently shared some of its new management techniques with U. S. industrial and business leaders. This time, it was the special system the Navy had developed for its highly successful Polaris submarine program.

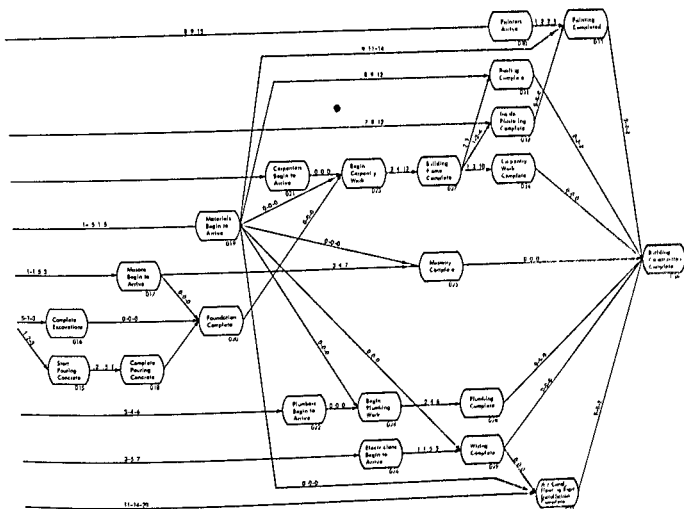
At the close of this particular briefing, a civilian stood up and announced with the conviction of a man who has found salvation that he was going to adopt the Navy's techniques.

"What type of industry do you represent?" asked the briefing officer.

"I manage a department store in New Jersey," was the reply.

Although a sea of difference separates retailing and missile-carrying submarines, there is a tie to bind these disparate commodities, or efforts.

* From *Think*, May, 1962, pp. 13-17. Reprinted by permission of *Think* magazine, published by IBM, Copyright 1962 by International Business Machines Corporation.

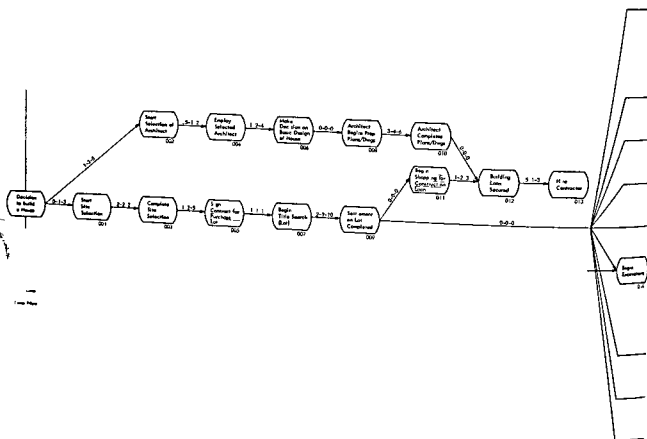


Events are not just the completion of hardware items or delivery of the items. They must include research tasks, decision-making steps, and administrative details such as the receipt of money.

Second, the sequence and interdependency between events is established. This is done graphically by means of a flow chart, which, in PERT jargon, is called a network. The events, represented by numbered circles or boxes, are linked sequentially by arrows, which represent the physical or intellectual work required to complete the activity. A glance at any PERT flow chart points up a bit of PERT logic that says: No specific event can be considered completed until all predecessor activities leading into it have been completed. At this time, successor activities to an event may start.

Third step in the process is to put a time value upon each activity. PERT requires three such time estimates: (1) optimistic, (2) most likely and (3) pessimistic. Thus the system adjusts itself to the uncertainties that lie ahead in a vast research and development effort. It is this feature that distinguishes PERT from the critical path method, which requires but one time estimate.

Navy officials define their time estimates as follows:



PERT: Program Evaluation and Review Technique. (Source: Howard Simons. "PERT: How to Meet a Deadline," *Think, May*, 1962, pp. 510-11. Reprinted by permission of International Business Machines Corporation.)

Polaris involves billions of dollars, millions of components, hundreds of thousands of tasks, tens of thousands of persons, and thousands of contractors, subcontractors and vendors. All are matched against a common denominator: time.

Essentially, PERT puts a tiny rural mailbox at each significant step along the projected program. When something untoward occurs, the red flag on the mailbox pops up to call attention to the fact that they will be in trouble, too, unless something is done—and done in a hurry. In this way, "soft spots" are seen by the contractor and the Special Projects Office alike and can be acted upon to prevent the deadliest Polaris management sin—lost time. It does so in this way:

First, initially, every significant event that must occur to realize the end objective is selected and defined. PERT abhors fuzziness. Words like "finalize" and "firm" are unacceptable. Rather, an event must be specific such as "arrival of 1st flight test vehicle at Air Force Missile Test Center."

are made anew, altering activity times and networks, and sped to the Special Projects Office and contractors. Simulation runs are also made to predict the effects which alternate courses of action will have on planned activity.

For example, a West Coast missile-maker found itself slowed down in developing a newer, more powerful Polaris. With PERT, it was able to simulate an alternate approach, feed the new plan into the system, and learn what effect the change would have on the entire Fleet Ballistic Missile program. In this case, the company wanted to use outmoded steel casings to test the more powerful missile while delivery of fibrous glass casings was delayed. The computer simulation properly predicted that not only could the change be made without adversely affecting the program, but would save three months.

In another instance, an impending strike at the plant of a Polaris contractor making a key component threatened the schedule of the entire program. PERT analysis was able to show that a second source, recently established to make the component, was far enough along in production to guarantee a steady supply without causing the program to bog down.

In still a third instance, the delivery of an important shipboard unit—which PERT indicated would slip its expected delivery date by four months over a 10-month period last year—was pulled back on schedule through the management action by the Special Projects office. Subsequent action provided for parallel testing of the unit with the ship's development to make up lost time. This had not been the previously planned route.

Although PERT's popularity does derive from the success of the Polaris program, it is wrong to suggest that it was the only management tool employed by Admiral Raborn's staff. Other management aids did and still do play a role. And although they served the early stages of the program well, they had near-fatal flaws: nowhere could the Polaris managers see interdependency to predict the effect of one man's action upon that of all others and the target date, nor to predict future slippage. The problem was not unique to managers. It had been posed 400 years earlier by George Herbert, and more recently by Benjamin Franklin: "A little neglect may breed mischief: for want of a nail the shoe was lost; for want of a shoe the horse was lost; and for want of a horse the rider was lost."

HOW THEY PERT A WEDDING

PERT was the Navy's answer—its way to spot the want of a nail far enough ahead of time to save the rider. "There is nothing magical about PERT," says one advocate. "Indeed, most persons employ the concept throughout their adult lives without ever calling it PERT."

The young couple who decide to marry and set a wedding date, for example, will inevitably PERT their task. They know, or will learn, that

"Optimistic is the shortest possible time in which an activity can be completed with good luck. (Everything falls in line the first time through, but no breakthrough contemplated.)

"Most likely is the best estimated time required to complete the activity under expected conditions of work accomplishment.

"Pessimistic is the longest time an activity would take if significantly worse luck (major redesign, major reshuffling of planned action, etc.) occurs (excluding acts of God)."

A DO-IT-YOURSELF FORMULA

Fourth in the series of PERT steps, the three estimates are computed to find "expected" time for completing the activity. This can be done—do-it-yourself—by using the formula:

$$t_e = \frac{a + 4m + b}{6}$$

Here, "a" is optimistic time, "m" most likely time, and "b" pessimistic time.

Fifth, the computer then totals "expected" times along every possible path of the network to determine the "critical path"—the longest distance in time between beginning and end. "Any shortening of total project time," explains a Navy PERTer, "must be accomplished by reducing the duration of the longest path. The critical path may be shortened by applying more effort to critical activities or by replanning the network to eliminate certain tasks or to perform more activities in parallel.

The computer also determines slack time—the spare time at any given moment between events. There are negative and positive slack times. Negative slack can mean trouble, and, for example, can tell a manager, or the Navy, that overtime or some other remedial action is necessary to pull an activity back on schedule. Positive slack, on the other hand, can tell a manager it is now time to stop overtime.

REPORT CARD TIME

In the sixth and final step, what derives from this series of computations is a report card in the form of standard printouts that "focuses management attention on those areas where corrective action is most needed and can do the most good."

Every two or four weeks, PERT reports are updated to reflect new decisions, program changes, new delays and resource shifts. Computations

cedure." It can be used to identify the specific allocation of resources, such as skilled manpower, for each activity to yield the lowest cost for one or more specified project durations.

Although revolutionary in nature—PERT/Cost recasts the traditional budgetary procedures which currently control costs by specified time periods and functional departmentalization—the new technique is an evolutionary approach designed to fit existing fiscal and accounting systems.

CUTTING THROUGH THE GUFF

Together, then, PERT and PERT/Cost promise to revolutionize industrial, business and systems management, if, indeed, they are not already doing so. Gordon Pehrson, who is credited with guiding PERT to fruition, is quoted in the book, *Polaris!*, by James Baar and William E. Howard, as having said: "Missile Gaps, expensive programs cancelled, confusion and fumbling: these things happen because we can't see ahead. PERT can show us where we are going. With PERT giving us information, when we say we can do something . . . we know what we're talking about. We have cut through the guff."

There are those who disagree in general, and some who disagree in particular. Two major criticisms have been voiced against PERT. The first is that it adds cost to the effort, and the second is that it is impossible to predict research progress.

As to cost, Navy officials answer that PERT adds only about a tenth of one percent to a contract price. As for estimating the time it will take to do a job in the future—a job which may be uncertain to begin with—Commander Daniel notes that mathematical equations have been worked out to provide a probable time for each activity. This is done using the distribution curves normally employed by statisticians. The result is that answers, very useful predictions and trends highly reliable for management purposes can be computed many months in advance.

PERT's proponents claim much for their system: it can aid planning, highlight areas for management attention, aid communications, save time, focus attention on coordinative actions, forecast probability of success, display status and progress, and allow evaluation of contractors and contracting agency. When PERT/Cost is added, the claims grow to include forecast of manpower skill requirements, cost status display, attention to overruns and allowance for the efficient allocation of resources among project tasks.

For all these potentials, however, PERT is not a panacea, and the first persons to admit it are members of the Special Projects staff.

certain events must occur some time between their decision and the day of matrimony: parental permission, engagement, blood tests, marriage license, preacher, ushers, church, flowers, reception, guest list, money, etc. It soon becomes obvious that events are interdependent and some cannot occur until others have been completed; that each takes a certain amount of time; and that events can and will be rearranged for varied reasons so the wedding date can be met.

Viewed without emotion, getting married is a relatively simple task readily integrated and processed by the mind. But the vastly complex task of building the first missile-carrying nuclear submarine—made even more difficult by the unpredictable uncertainties of research and development—is not. For this reason, most experts agree that PERT was not practical for complex jobs until the advent of the digital computer to permit rapid and statistical analyses.

Until very recently, there was no effective way for even PERT managers to evaluate performance against dollars spent. Now, however, PERT techniques have been extended to manage dollar activity. The name given to this effort is PERT/Cost system. Commander John Daniel, head of the Special Projects Office Program Evaluation Branch and, as such, head Polaris PERTer, calls PERT/Cost "a new departure in management development."

DOLLARS SPENT, PROGRESS MADE

Already being pilot tested under the direction of Management Systems Corporation at the General Electric Ordnance Department, PERT/Cost will soon be integrated into PERT itself. This eventuality, says Commander Daniel, will enable us to tie the planned expenditure of dollars spent to the planned schedules and relate these to dollars actually spent and progress actually made.

"For any position in time," he explains further, "we will know for the first time how much we planned to spend to get where we want to get and, at the same time, how much we have actually spent to get where we are. We do not, however, plan to put a dollar value on every network activity, but only those that are deemed significant."

PERT/Cost is a mirror image of PERT with the exception that only one dollar estimate is made against three time estimates for PERT. But unlike PERT itself, PERT/Cost offers supplements. One is called the "time-cost option procedure," and it permits the selection of the "best" plan dependent upon the relative importance of cost, time and risk in each of three alternate plans which have been weighted as low, medium and high risk alternatives for accomplishing the project.

The other optional supplement is called the "resources allocation pro-

SCHOOL DISCIPLINE *

Lawrence E. Vredevoe

This report is a summary of the study of school discipline during the past fifteen years which included schools in the United States, Canada, and fourteen countries in the Middle East and Europe. The conclusions are based on visits to the schools, personal interviews with parents, teachers, school administrators, students, community leaders, and law enforcement agents, and group interviews and discussions. The visits included private, public, large, small, urban, and rural types of secondary and elementary schools. The purpose of this summary is to present a brief outline of the basic problems and conclusions based upon the observations, findings, and data collected. More detailed reports have been or will be given on the different areas covered.

The problem of school discipline will become more acute in many communities and schools during the next decade as a result of the following:

1. The necessity for every boy or girl to obtain a high school diploma in order to obtain any type of permanent employment in the future. The holding power of the schools will not reflect the desire or interest of some of the students, but their recognition that they must have a diploma or certificate of completion of high school. This will keep in school a larger number of those who in the past did not stay and really do not care to stay now.
2. The expansion of our secondary schools into large institutions in which students will be administered rather than guided by teachers who really know or understand them because of close association in class or small home room groups. Factors which will have a tendency to increase the size of secondary schools are the rising cost and availability of land and also the increase of the population density in certain areas.
3. The confusion about the standards which should be maintained relative to behavior of adolescents in or out of school.
4. The increasing lack of respect for laws and regulations and those responsible for enforcing them.
5. The increased unemployment among youth and lack of opportunity

* FROM *The Bulletin of the National Association Secondary-School Principals*, March, 1965, pp. 215-225. *Third Report on a Study of Students and School Discipline in the United States and Other Countries*. Reprinted by permission of the National Association of Secondary-School Principals and the author.

A POWERFUL TOOL

"To apply PERT unreasonably," Commander Daniel says, "is to invite a lot of trouble. PERT puts a powerful tool in the hands of executives, but it does not replace sound management. The Boss must want to use it and even then it will be effective only if its capabilities and limitations are understood, all management levels cooperate and *it is used for decision*—the manager must decide, the computer won't do it for him.

"Beyond this, a staff of evaluators is needed to monitor and evaluate the program. This is essentially the function of my office. It is not an inspector-general's office. Rather, we probe for soft spots in a gentlemanly way with the complete cooperation of everyone from our own people to the contractor. Because there is no time for a single manager to look at the entire program, we manage by exception, using PERT and our other management tools to predict ahead potential trouble based upon the best available information at the moment and in time to do something about it."

Each Monday morning, Commander Daniel, as did his predecessors and as will his successors, answers the question, "What are the problems?" Using PERT techniques—now a matter-of-fact part of the continuing Polaris program—the evaluator is able to characterize the problems for the managers, decision-makers and planners to enable them to act: be it dropping out events or adding resources or juggling planned activities or taking risks. The management system has worked so well that whereas one Polaris missile submarine was to be on station by 1963, by this year's end nine will be in the "dark reaches of the oceans" providing the nation with a unique strength to "decisively punish an aggressor."

Handling Other Problems

Discipline and Secondary Schools

A report on a 15-year study of students and school discipline in the United States and other countries is the subject of Lawrence E. Vredevoe. This selection summarizes why school discipline will become more acute in many schools during the next decade; compares discipline in American schools to that of schools in foreign countries; reviews problems of discipline and desegregation; and presents factors that aid in developing good behavior patterns in schools.

for rules, regulations, and their enforcement, respect for superiors and fellow students, and a recognition for the need of self discipline and participation in maintaining good school discipline. You might desire to include others, but these were the ones looked for in this study.

IS DISCIPLINE WORSE IN AMERICAN SCHOOLS THAN IN SCHOOLS IN FOREIGN COUNTRIES?

I cannot answer for all countries, but I summarize my findings in fourteen countries in the Middle East and Europe and three provinces in Canada as follows:

1. *School discipline is a problem at home and abroad.* Discipline is a chief concern in ninety-five per cent of all the schools visited and among ninety-eight per cent of the teachers interviewed. Schools and teachers with good patterns of discipline in their classes were concerned about changing conditions which might change these patterns. Others were trying to establish good patterns.

2. *The problem of school discipline in different countries is in part related to the administrative organization, compulsory school attendance laws, and the cultural pattern.*

a. *Countries which organize their schools on the principle of keeping the sexes separate do not eliminate all the problems of school discipline, but do not face those resulting from coeducation.* Boys' schools and girls' schools have problems, but these schools do not have some of the problems which occur when boys and girls are together. At the same time, a majority of those interviewed in both separated and coeducational schools believe that coeducation is on the increase and is inevitable for most countries during this century. Although coeducation does present some new problems of school discipline, it also presents a more natural condition for the training of good conduct, courtesy, and respect toward members of the opposite sex. *Separation of the sexes does not solve the problems of school discipline. It merely eliminates certain ones and creates others.*

b. *Neither men nor women teachers appear to have a monopoly on the competence or leadership needed for good school discipline.* Outstanding examples of both good and bad situations were discovered in schools where the teachers were all men or all women, or where the faculties were mixed. Some women teachers had better control over boys in certain schools than men teachers and *vice versa*. Student interviews indicated that sex was not as important as competence and understanding of students. Local social attitudes toward women were important factors in determining the position and effectiveness of women in the schools. In some of the countries visited women are not to be considered capable of teaching boys. However, some of the students, teachers, and parents interviewed questioned this

to get an honest-to-goodness job or work before the age of eighteen. Closely associated with this is the waste of human resources by keeping youth from the labor market or opportunity to get part time or real work experience.

6. The increased need for things and opportunities and less of a chance to earn money to pay for them.
7. The discontent, bitterness, and resentment on the part of those who recognize that their chances will be more and more limited because of the demands for better trained and qualified employees.
8. The great pressures upon getting a college education and feeling of failure or being a second class citizen if you don't. We are failing to recognize that education is more than college degrees and units of credits.
9. The increasing attitude of teachers that your status depends upon whom you teach, what you teach, and where you teach. Students who need certain classes and experiences are not electing them because of their status in the eyes of parents, administrators, and teachers. Too many of us think that such classes are just what is needed for somebody else or their neighbors' children, but beneath the dignity of ours.
10. The automobile, which gives a wide range for youth to roam and a private room on wheels. Many of the incidents associated with some schools have not been instigated by their students or students of any school, but rather by a roving, roaming, and careless type of youth. The automobile is here to stay, and the problems associated with school discipline because of it will increase, not diminish.
11. The failure of some teachers and schools to make the work challenging or meaningful.
12. The stimulation of students by individuals and groups to defy authority and to associate their lack of ability and status with a hate imagery which usually includes those who seem to have what they want.

This summary of the data and information collected is presented in answer to three questions most frequently asked, namely:

- Is discipline in United States schools worse than that in schools of foreign countries?
- Is desegregation increasing the problem of school discipline?
- What are the factors or practices which aid in developing good behavior patterns in schools?

First, let me state that I believe that good school discipline is evidenced by consideration for others, respect for private and public property, respect

and controls the lives and thinking of the majority of citizens. The status of those in authority differs from those in countries where there are several cultures and religions playing a part in determining individual attitudes and actions.

Parents in Middle Eastern countries are more reluctant and in some cases never go to the schools to question the authorities' actions except where bodily harm has resulted. In Europe, the practice differs in countries and especially where closer home and school relationship has developed. In certain countries parents are closely associated with the school activities and in others in only a formal manner.

Another factor related to the cultural pattern affecting school discipline is the social status of the teacher. In some countries teachers are more respected by students than by their parents. Wherever the status of the teacher was high, the work of the administrators and teachers was more professional in dealing with problems of school discipline. In the countries where teaching did not rank very high in social status, the type of persons found in the administrative and teaching positions seemed to reflect this in both attitude and training. Sufficient evidence was present to indicate that this phase of school discipline, as well as the quality of instruction, could well serve as a basis for an independent study.

It was interesting to find that parents in some countries who were critical of the schools did not severely punish their youngsters for failure to behave or succeed. But at the same time they wanted their children to stay in school and succeed. Discipline was considered a problem of the schools, and any practices employed by authorities were accepted as necessary. Again the cultural or religious pattern played an important part in their attitude.

e. *School organization for special groups*, such as *trade and industrial, commercial, general*, and college preparatory students, also affects discipline because of the type of students brought together and their interests and attitudes. Some of the students in these special schools felt that they were discriminated against and revealed a dislike for those who were in the schools of higher status. There was clear evidence on the part of teachers, parents, and students that where special schools dominated the administrative pattern, each school was considered on a different plateau of social status. Attitudes and actions on the part of teachers and students in these schools seemed to reflect this. In some countries identification is further carried out by dress or caps.

The recognition of the comprehensive secondary school as best fitting the needs of this age is growing in the Middle East and Europe. Some are not convinced that problems are increased by bringing together all programs and students in one school. At the same time, the advantages of being able to tailor the program to the student needs and not the student to the program, far outweigh the disadvantages. The comprehensive school

conclusion. One administrator said, "I have seen women teachers in England and America doing better work with boys than some of my teachers. But as long as we can continue to keep our people believing that men are better, we will be kept from being tested. I'm not certain that we would have our theory disproved if it were put to a test." An administrator in one European school where teachers were mixed said, "I always wanted to believe that men teachers were better than women but my twenty years' experience in working with both has not supported this attitude. It's not the sex of the teacher but the competence and leadership of the individual." Evidence was available that both the lack of competent teachers and increased communication among countries have raised some questions about the practice of restricting teachers of boys or girls to either men or women.

c. *Compulsory school age attendance laws did play a part in the problems of school discipline.* Where secondary school attendance was a *privilege* instead of compulsory, administrators and teachers did not worry about the constant trouble maker. They just expelled him. Parents in these countries were most eager to have their children remain in school, and for that reason students felt the pressure from both home and school to behave properly. It also gave administrators and teachers in some communities almost unquestioned authority as to what should be considered good conduct. The opportunity to expel or threaten to expel a student did not solve the problem, but gave a solution to school authorities. Two administrators claimed that teachers in their schools were too quick to recommend expulsion and too slow to try to help the students correct their ways. In one of the countries where the compulsory school age has been extended, four of the administrators interviewed indicated that at times they wished they had the freedom to expel more students. But they admitted that the new laws do make them work harder to solve the problem. *There is no doubt that lack of compulsory school attendance does have an effect upon students' attitudes toward rules and conduct. School is then a privilege rather than a requirement.* But compulsory school age attendance laws are being extended in many countries, and expulsion as a way of meeting cases of discipline is being curtailed. Teachers and administrators are recognizing or being forced to find other ways of coping with problems of school discipline than dropping students from school. In some countries students cannot find employment because of age or lack of training, and must be taken care of in some program.

d. *The attitude of citizens, parents, and youth toward authority and law enforcement within the culture is reflected in the discipline of the school.* In some countries where a certain religion dominates the culture, parents' and students' attitudes toward authorities have an effect upon the problems in the school. Students have been conditioned to an authoritative atmosphere and do not question or rebel against authority. Rules and regulations are accepted, not questioned. This is also true where one culture dominates

- d. Expulsion or segregation has greater effect on the student than corporal punishment. (However, this is not possible in many cases.)
- e. The use of corporal punishment is usually employed by those who should not be permitted to use it. They seek to eliminate or control a problem rather than to solve it.
- f. An increasing number of districts legislate against the use of corporal punishment or so regulate its use that it has greatly decreased as a practice in disciplinary cases.

IS DESEGREGATION INCREASING THE PROBLEM OF SCHOOL DISCIPLINE?

1. It was observed that desegregation may or may not result in poorer discipline in the school. The competence of the teaching staff, their attitude and interest in minority groups, the mental climate in which the student is working and studying, and the challenge and motivation of the program are the major factors.

2. Students may transfer the hate image to those in the school who represent the ethnic or social group that owns the hovels and tenements in which his parents and group are being exploited. This must be recognized and dealt with effectively. Ethnic groups must themselves discipline members who misrepresent them or be willing to pay the price. Housing standards and codes must be enforced and the exploiters punished, or this will prove to be the greatest breeding place for "anti" and hate campaigns and open rebellions. The hates engendered in the heart and mind of the child cannot easily be erased or changed. The most likely place to develop these is under housing conditions which permit exploitation, filth, and crime. Sometimes the school is the first place where the individual comes in contact with those who represent the ones he blames and hates, although the recipients may be totally unaware of the reason for such acts and not guilty. Transference of hate to other students may cause serious disciplinary problems.

3. Forced transfers or open enrollments usually favor the individual who has a dominating parent. Then too it depends much upon who you are and what you are. One school, so eager to equalize things, transported both in and out in order to be fair. However, an analysis of those transferred disclosed that not one child of a board member, teacher, parent association officer, or community leader was involved. When asked about this, the administrator said, "You know why. I didn't think you would notice. I hope they don't." Transfer often creates new problems for the student involved. He is a foreigner at school and becomes one to his old group at home after school.

may be more expensive and difficult to develop, but it does eliminate to some extent the identification of students or schools on certain social plateaus. It creates some new problems of discipline but eliminates others. It is rapidly becoming the pattern of school organization in some countries and more slowly becoming the pattern in others. Some countries are still in the planning stages.

3. *Practices in school discipline in the different countries represented a mosaic pattern.* Forms similar to those found in the study in this country were discovered in several of the schools. The difference in corporal punishment was primarily in degree rather than method. In two of the countries certain violations brought a certain number of strokes with a paddle or cane. One of the private European schools charged the parents for school canes purchased under the item of "medicine." In another school, students upon graduation tried to purchase the ones used on them during their school days.

Corporal punishment was generally recognized as a practice which was to be questioned. In some countries corporal punishment is forbidden in public school but practiced in private ones. In two of the countries visited one had to have special permission from the district authorities and then one was required to have witnesses present. Teachers claimed that by the time you made all the arrangements the effectiveness had been lost. As in this country, cases of corporal punishment, when it was forbidden, were discovered. Administrators frankly told some teachers, "If you use it, don't tell us about it and don't have any witnesses." One teacher reported that his supervisor said at a teacher's meeting, "If you use corporal punishment, remember it is against the law, so make certain you have no witnesses and leave no scars." Certain teachers were using corporal punishment in this district regularly. In another school district, corporal punishment was very seldom used because in two cases the fathers of the students punished came to school and administered corporal punishment in return to the teachers involved. Apparently they wanted to reserve the right for themselves.

The fact that corporal punishment, with or without consent of the authorities, was practiced in most of the schools visited is not as important as the general attitude toward its use. Generally, teachers, administrators, and parents recognize that corporal punishment involves more dangers than advantages. The opinion can be summarized as follows:

- a. Corporal punishment is a means of dealing with the symptoms, not the cause.
- b. Those usually given corporal punishment are used to it and, as a result, it has little deterrent effect in some cases.
- c. Corporal punishment and teaching as a profession do not belong together.

- Transfer of the present staff members in these schools to other schools where they could benefit from the inservice training opportunities would help upgrade the teaching performance.

These suggestions do not imply that there are not now competent teachers and administrators to be found in these schools. At the same time the transfer of the best student leaders out of these schools is rendering a disservice to both the schools and the communities. Therefore the transferring of competent staff leadership into these schools to supplement that which is there will make it more attractive for the student leadership to say where it is most needed. If competent teachers and administrators are the basis of good schools, we should strive to provide these where they are most needed. It may cost money, but perhaps not a lot more than we are now spending on plans which are not solving the basic needs. If we are sincere about our interest in equal educational opportunity for all and the development of better attitudes, ideals, and goals for students of today and parents of tomorrow, cost should not be the first consideration. Our best defense against the development of undesirable attitudes, ideals, and conduct on the part of students both in and out of schools is a strong offensive program. This requires, among other things, the best teachers and administrators in all our schools in all parts of the district or city.

WHAT ARE THE FACTORS OR PRACTICES WHICH AID IN DEVELOPING GOOD BEHAVIOR PATTERNS IN SCHOOLS?

The practices which students and teachers seemed to believe were most successful in developing good teacher-student relationships did not differ according to size, location, or composition of student body. In the schools selected as representative of the best citizenship and teacher-student relationships these practices seemed to be common:

1. There was an understanding and apparent recognition of the purposes and values of the standards and rules in force by faculty and students.
2. Emphasis was placed upon self-discipline by teachers and students.
3. Good citizenship and conduct were characteristic of the faculty as well as the student body. Courtesy, consideration, respect, professional dress and manner, and good speech were practiced by the faculty members.
4. Standards and rules were subject to review and change, but *were enforced until changed by due process*.
5. The emphasis in treatment of all discipline cases was upon *the individual involved and not the act*. This represents a significant change in law enforcement in our democracy in the past fifty years. Today society is more concerned with the transgressor than the crime.
6. Students could expect fair but certain reprimand or punishment for

4. Teachers and administrators must be selected on the basis of competence, not on the basis of who they are or the group they represent. An incompetent teacher is both a misrepresentation of the profession and the ethnic group from which he comes. If a certain group lacks sufficient numbers of qualified applicants, an analysis should be made of the causes and a program to remedy the situation inaugurated. It is neither fair to students nor any group to select school personnel on any other basis. To do so will develop problems in school discipline.

5. The real basis for improvement is the transfer of teachers and administrators, not students. The location of the school, equipment, facilities, and materials is not as important as competent and dedicated staff members. The solution of this problem will prove more delicate and difficult to deal with than trying to do it by the transfer of students or closing of schools. Interviews disclosed that teachers and administrators recognized this need, but hoped that others would be sent. Factors which must be dealt with if such a plan were to succeed according to data collected would be:

- a. Transportation—all teachers could not be expected to live in the community or district.
- b. Time element involved—allowance would need to be made for extra time required in crossing to different parts of the district or city.
- c. Assurance that a staff equal to the one they are now associated with would be provided in the schools to which they are being transferred.
- d. Assurance that there would be some time limit on the period to be served in the school.

The following suggestions are made as a possible solution to the need for transfer of teachers:

- Requirement for service in these schools and districts for all promotions to administrative positions. This would make them more understanding when they become administrators. Successful teaching is usually a requirement for promotion. Some of the best administrators in the country have served in such schools and later found the experience valuable.
- Transportation of teachers from a center or centers with recognition of additional time involved. Teachers cannot be expected to drive to and through some of the districts where the schools are located.
- Incentive increments in salary or sabbaticals in recognition for service should be provided.
- Selection on the basis of merit, interest in such service, and competence should serve as the criteria for assignment, not merely interest on the part of teachers for extra benefits.

SUMMARY

In summarizing observations and comments by teachers and students, it is evident that good discipline is essential for good schools, and it is found in many schools and classrooms today. Practices which bring about better relationships are those not so much related to the punishment of the transgressors, but in the methods of development and interpretation of the standards and the rules. Good citizenship should begin with the faculty members. Competence on the part of teachers who have a feeling of confidence and security is basic in developing good relationships with students. Whenever punishment or disciplinary measures are required, they should be suited to the individual rather than the transgression. Fairness, consistency, and understanding should be characteristic of teachers in their treatment of disciplinary cases. Good discipline and teacher-student relationship is the result of intelligent, cooperative, continuing, and united efforts on the part of all staff members and student leaders.

In conclusion it is safe to say that good school discipline does not just happen or develop, but results from a competent, alert, and understanding staff of administrators and teachers. The next decade will be a real challenge to all of us who will be working with adolescents. It is important that the three to five per cent who cause the problems and lack self-discipline or willingness to cooperate should not be allowed to waste the time or opportunities of the ninety-five per cent. Students should not be blamed for lack of good school discipline until we examine the challenge of programs, competence of staff members, and the factors which develop good school citizenship. If you have good school discipline, make every effort to keep it, and if your school lacks it, study the causes and don't spend so much time dealing with the symptoms.

Advice for Beginners

All young secondary school administrators and many not so young probe constantly the wells of wisdom of their older associates. The following practical advice from Edwin J. Brown taken from fifty retiring principals, each with 25 to 40 years of experience, provides years of wisdom for the "young in inquiry."

violation of rules and standards. Teachers were confident that their colleagues were also trying to cooperate in maintaining standards.

7. The punishments meted out were *fitted to the individual rather than the transgression*.

8. *Faculty and students* cooperated in establishing, maintaining, and revising rules and standards.

9. The program was challenging to all groups.

Students questioned about the practices which they believed created the best relationships mentioned the following in the order of their frequency:

1. Interpreting the reasons and purposes of the rules.
2. Fairness in enforcement.
3. Treatment which recognized maturity of student.
4. Consistency in enforcement.
5. Enforcement without embarrassment whenever possible.
6. Observance of the rules by teachers.
7. Opportunity to participate in making rules in areas where students are capable.
8. Elimination of waste of time of the many for the need to discipline the few. Students believe some teachers spend too much time during the class period with discipline cases which should be taken care of at another time. (Only about three to five per cent of students are disciplinary problems, but they consume much of the class time of the other 95 per cent.)
9. Making the work so challenging that students will be kept busy and interested.
10. Conduct on the part of the teachers which demonstrates competence in dealing with adolescents. Teachers who can win the respect of their students.

The following are the characteristics of teachers who seemed to have the least trouble with discipline in their classrooms.

- Competent in teaching area.
- Knowledge of biological, sociological, and psychological characteristics of adolescents.
- Sense of security in position, administrative relations, parental relations, and with public. Assurance of administrative backing in enforcement of rules and regulations.
- Professional conduct, manners, and appearances.
- Sincere interest in adolescence and teaching.

this way: "All of us have the same number of hours in a day. It isn't the amount of time but how one uses it that counts." All pointed out that knowledge by itself means very little. It is how one used his facts. It would seem that these men might have been thinking of Cowper's statement:

Knowledge and wisdom far from being one
Have oftentimes no connection.
Knowledge dwells in heads replete
With thoughts of other men,
Wisdom in minds attentive to their own.
Knowledge a rude unprofitable mass,
The mere material with which wisdom builds.

YOUR CHARACTER AND CONDUCT

Every one of the fifty replies received put emphasis upon the principal being a man's man, but always a man whose conduct and character are worthy of emulation. Many said they expected him to be a gentleman first, a schoolman second. One said, "He must never be a pantywaist." Again and again, these men said: "Formulate worthy ideals of personal and professional conduct." Summarized, these items showed up:

1. Build an enduring foundation. You cannot be a schoolman or a gentleman part of the time.
2. Be sincere. You must be what you expect your teachers and pupils to be.
3. We need fewer precepts from our administrators, more fine examples.
4. In building for the future it is well to remember that men's esteem is more to be desired than their applause.
5. Efficiency and general popularity are rarely found together. There are times when you cannot give everyone what he asks. You may have to step on toes.
6. Don't try to go up too fast. In school work, as in all forms of human endeavor, the man who goes up like a rocket commonly comes down equally fast.

MEETING AND OVERCOMING DIFFICULTIES

Again and again, these men who had been on the firing line pointed out that there is no way of entirely avoiding difficulties. They stressed that in an administrative job is first of all a public relations job. Conflicts are inherent in such positions. To avoid conflict as much as possible, but to handle it with dispatch and efficiency when it does appear, marks the good

EXPERIENCED SCHOOLMEN TALK TO BEGINNERS **Edwin J. Brown*

A number of years ago the *NEA Journal* published the names and addresses of fifty principals of schools (elementary and high school) who were retiring after periods of service ranging from twenty-five to forty years. With the thought that these men surely had something to offer the beginner, and recognizing that for the first time in many years they had time for some extracurricular work, I sought their answers to this query: "*What do you think an older principal can say to a beginner that will be of help to him?*" They answered to a man. Here are their replies, summarized and reorganized. It was found that the replies fell rather naturally into four general categories, not necessarily reported here in order of frequency or of importance.

1. Being professional. Keeping up with the job.
2. One's general conduct and character.
3. Meeting and overcoming difficulties.
4. Maintaining good relationships with people.

KEEPING UP WITH YOUR JOB

These fifty principals, wise in the ways of parents and pupils, without exception stressed the importance of being a constant student of the profession. All suggested the necessity of keeping up with modern movements in education. They said one keeps up in five ways:

1. Reading—books, professional magazines, periodicals, researches, the daily papers.
2. Attending meetings—national, state, county, city, local.
3. Visiting—schools, theaters, museums, art galleries, people, each other.
4. Experimenting—little internal studies set up for the purpose of finding answers to little unsolved problems.
5. Participating in workshops and attending summer school.

Many pointed out that the stock excuse, "I don't have the time," won't stand up under close scrutiny. One of these experienced schoolmen put it

* FROM *Phi Delta Kappan*, February, 1966, pp. 320-322. Reprinted by permission of *Phi Delta Kappan*.

2. Most of us do not give enough time to our *attitudes*.
3. We differ much in our ability to be friendly.
4. A friendly, genial attitude towards others is partly an acquired characteristic.

5. Don't give the stock excuse you were born that way. You were not. One schoolman said he once stopped to get a haircut in a small town where he was to give a commencement address that evening. The one-chair shop was filthy, the barber was no cleaner than the shop. The barber, while working on the schoolman, chewed tobacco in a way which was offensive to both the olfactory and auditory senses. Occasionally he would pause and with considerable accuracy, lubricate the cuspidor. To the protest that the tobacco was offensive he replied, "I can't help it mister, it's my nature."

6. One stated, "In my analysis of myself I must remember that I have four aspects: what I am; what I think I am; what others think I am; what I think others think I am." This man emphasized that one is to a great extent what others think he is. One tends to live up to a reputation, especially if it is good.

7. Closely related to friendliness is one's attitude toward his job. Discipline is the most common cause of friction. Be a good listener—let others tell their stories.

8. It is wise to endure what one cannot cure. Life is not a little bundle of big things but a big bundle of little things.

9. One should lay down his work at the day's end. Don't take either your work or your troubles home with you. One advised, "Don't take a briefcase with work in it home with you."

10. Health goes with relaxation. Enjoy your family. Play golf, bowl, hunt, fish. Handle your job, don't let it manhandle you.

MANY DON'TS FOR THE ADMINISTRATOR

Since these retired administrators were asked to give advice, many of them did just that. There was, of course, much repetition, but below are listed some of their more pertinent suggestions of pitfalls to be avoided:

1. Don't be overly impressed with you M.A. or even your Ph.D.
2. Don't forget that many of today's finest professional men and businessmen were yesterday's irresponsible youth.
3. Dress well. Your employer will pay for your clothes. It is easy to see merit in a well-dressed person.
4. With your best attire, wear a smile. You are not well dressed when you are grouchy.
5. Don't forget how young your pupils are.
6. Don't take yourself or your job too seriously.

administrator. One pointed out that true success does not consist of avoiding difficulties but in making good results come from the difficulty. "It is not the rose without any thorns which is sought, but the bush which produces the finest blooms." This same metaphor was employed by two men. Here are some of the other remarks:

1. No one has truly lived who has not met and overcome difficulties.
2. It is difficult to appreciate the highlands when one has not lived in the lowlands.

3. One quoted:

Who ne'er has suffered has lived but half,
Who never failed has never strove nor sought,
Who never wept is stranger to a laugh,
Who never doubted, never thought.

4. Another told this story: When Kipling lived in America he made a study of Lincoln. Lincoln was discouraged and disconsolate because of the difficulties he met and the criticism he was getting. One day when he was in that mood his secretary came in and said, "Mr. President, may I read you some clippings?"

"Go ahead," said Mr. Lincoln.

The clippings were scathing. After reading them, the secretary turned to the President.

"Of whom do you think they were written?"

"Of me, of course. That's what I get daily. I've done my best; I've met so much criticism and abuse."

"No, that wasn't said of you. It was said of George Washington when he was President."

Amazed, Lincoln said, "Well, if they criticized George Washington like that I cannot expect to be exempt. They said that about him *then*, but see what they say about him *now*. I will keep on doing the best I can, the best I know how. Maybe they will say something good of me at the end."

GETTING ALONG WITH PEOPLE

A very prominent university president said recently, "The biggest and hardest part of the job is getting along with people. An administrator's job is becoming more and more a public relations position." It would seem from the emphasis our retired schoolmen put on the idea that they were in entire agreement. No administrator works from an inner office. He works with people—and people have likes and dislikes, fancies and foibles, moods and temperaments, strengths and weaknesses, convictions and prejudices. Here are some statements the retired schoolmen made:

1. Were I a beginning school administrator again, I'd do my utmost to cultivate a genial disposition.

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OTHER SIGNIFICANT COMMENTS

These men made many other comments, some of them trite, others well worth recording:

1. Remember that tradition is a strong force. It doesn't *break* easily but it will *bend* readily. Bend it when necessary.
2. Support your teachers. Never let a teacher be wrong before a pupil.
3. Be honest and frank with pupils. Nine out of ten want to do the right thing. The other 10 per cent can't wreck your school, although they can hurt it.
4. Never make an unnecessary rule or regulation or one which is going to be difficult or impossible to enforce.
5. Promise little but keep the promises you make.
6. Let the parent talk and tell her whole story regardless of how "mad" she makes you. Usually all she needs is a chance to unload.
7. If you have been unfair, don't go home until you have corrected your injustice.
8. Distribute responsibility—and authority. Most people will take the responsibility and very few will abuse the authority.
9. Don't be afraid to take a bigger job.
10. Pay your bills promptly—and live within your income.
11. Build a reputation for fairness, honesty, firmness, and friendliness. What you are as a principal is reflected in your school.
12. Beware of *inertia* and *tradition*. Both are inimical to progress.
13. Never let a young person down. Never let a child lose confidence in you.

These men did not use the quotation below from John Oxenham, but each implied the same thought repeatedly:

To every man there openeth
 A Way, and Ways, and a Way,
 The High Soul climbs the High Way,
 The Low Soul gropes the Low,
 And in between, on the misty flats,
 The rest drift to and fro.
 But to every man there openeth a High Way and a Low
 And every man decideth the way his Soul shall go.

ADDITIONAL READINGS

ANDERSON, LESTER W., and LAUREN D. VAN DYKE. *Secondary School Administration*. Boston: Houghton Mifflin Company, 1963.

you sit. For the parent concerned with reading, writing and arithmetic for his child, there probably is too much television and too many movies, teaching machines and educational hardware. For the media specialist, for the person responsible for the development of media, their adoption and expansion seem painstakingly slow and overwhelmingly limited.

Certainly statistics won't tell the whole story—the number of television sets in American schools is a poor measure of the impact and utilization of television, just as the number of film projectors sold or the number of films distributed during a school year is an ineffective measure of the real role these things play in creating better education.

Regardless of the problems involved, a review of current status and trends in the use of learning media is necessary to aid the policymaker in the realistic development of a school building project. These following points have been gleaned from seminars, talks, papers, discussions, field trips and current literature.

1. In spite of all that is said and written, learning media are not being employed extensively in American Education. For every classroom with an overhead projector, there are hundreds without one. Conventional education of the "2x4x6"¹ variety still predominates; effective use of media in new ways is rare. Less than 1% of our total educational budget is spent for learning media and instructional aids.

. . . When we . . . talk to people who are emotionally involved and committed to the values that we see in the field of instructional technology, we might think that a great deal is going on in the country; we're not very realistic about how little is being done. When we talk about the efforts being made here and there, we must realize, I think, that one sparrow does not make a summer.

2. In spite of such small actual usage, learning media have had a surprisingly large impact on education. Investigations of their potential value have called forth curriculum studies, course revisions, redefinition of educational goals, review of the library's role, establishment of basic learning objectives, employing systems analysis techniques in designing learning and a list of other significant and healthy by-products.

3. Through learning media the classroom teacher and college professor, and the individual student, now have at their disposal an array of devices to help achieve learning objectives. For the creative and motivated teacher, this is a challenge and an opportunity; the uninspired and uncreative will remain largely unaffected.

4. Federal, state, and foundation support and industrial promotion have brought the use of learning media to present status. Nothing indicates

¹ 2 covers of the book, 4 walls of the classroom, 6 periods of the day.

The Changing Role of Media and Technology

Media and Technology

Media and Learning

The development of learning media is making a major impact on education. There is probably no other area affecting the schools that is closer to the educational revolution than media and technology. Yet the status report that follows indicates that less than one per cent of the total educational budget is spent for learning media and instructional aids. An important aspect of this status report is that media is not a substitute for the teacher, but it is a useful tool that can greatly improve learning.

LEARNING MEDIA: STATUS AND TRENDS*

Alan C. Green, Editor

The development of learning media has certainly had an impact on contemporary education. However, the impact is relative, depending on where

* FROM *Educational Facilities with New Media*, Alan C. Green, editor, 1966, pp. A-23 to A-29. Copyright 1966, Center for Architectural Research, Rensselaer Polytechnic Institute. Published by the Department of Audiovisual Instruction, National Education Association. Reprinted by permission of the Department of Audiovisual Instruction, National Education Association.

to find that all boundaries between media units—library, TV and radio, A-V, graphics, etc.—are going to be cut across, and all media units are going to be brought together. The reason, I think, is obvious. All of these media units exist for a common purpose,—to provide the materials, the services, and the skills so that effective teaching and learning may take place.

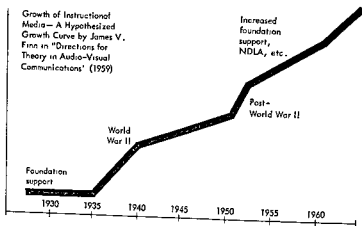
8. The amount of hardware available, the types and variations in equipment and the number of functions they can perform, are increasing and will continue to increase at a rapid rate. Unfortunately there is a tendency in selecting instructional equipment to overlook the need for matching the electrical characteristics and interconnection provisions of "hardware" items. Thus, in many instances a school may find itself in possession of an oversupply of mutually incompatible items and will lack the facilities needed to implement its overall instructional program.

Staff members responsible for the selection of instructional media hardware must keep themselves fully informed concerning the availability of equipment and components of interest to their institution. They should be fully qualified to match product functions and performance capabilities of equipment with requirements for achieving learning. In turn, industry will become more responsive to the needs of education as education becomes a major market for hardware.

9. The greatest need is the development of a single, economical system for the distribution of good quality audio and color video. When such a system is available for inter-connecting facilities in buildings, between buildings, and between institutions, then the ready availability of resources will become reality. The input for such a system must be highly flexible to include three dimensional, moving and still materials; the output or reception must be equally appropriate for individuals, small groups, and large groups.

10. There is now a variety of audio-video recording devices. When these become completely dependable, inexpensive, and available for color, then some significant changes in technique and methods can be realized. No longer will live demonstrations in the sciences be necessary; finally the benefits of the field trip can be realized without the problems of moving large numbers of students away from the school; and broadcast television will become useful at the school level through recording and local use at appropriate times. Each independent school and teacher will be able to structure the use of mass media to fit a particular system of education.

11. Equipment will be perfected and economically feasible for making media available for learning on an individual student basis. Films, tape, and slide materials will be as easily used and as inexpensive as printed books. This will bring together the two most significant trends in education—individualized instruction and use of learning media.



that such support and promotion will be withdrawn; if anything, they are being expanded. However, without such incentive it seems doubtful that American education would have espoused learning media as extensively as it has.

5. The use of learning media is not "taking over" education; teachers will not be replaced by technology. Media broadens the spectrum of education; they do not, of themselves, provide an education. Even the most media-oriented educators recognize limits and valid restrictions, and are simply trying to establish the most appropriate roles for media within the total educational process.

6. The teacher interested in using media today is faced with some real burdens—complicated and costly equipment, poor maintenance, inadequate supply of parts and replacements, immobility of equipment, lack of technical assistance, and improper facilities. Add to this the problems of finding the assistance and the time to learn to use media well; it is surprising that teachers and professors use media at all. These basic logistical problems must be solved school by school, teacher by teacher.

7. Utilization and administration of media are often fragmented; in fact, the development of media has been a history of audio-visual cults. An integrated, multi-media approach has only recently been recognized as significant for success.

At last the film makers, the television specialists, the graphic artists, and the others are being brought together physically, administratively and philosophically. This is the first requisite for a systems approach to learning and for significant multi-media usage.

We're going to have to get away from a fractional approach to media in which the library and its book materials compete with other components for budget, recognition and attention. The systems concept, which cuts across existing boundaries and brings all major operating systems into one functional organization, is what education is going to adopt. I think we're going

center has created a new concept of use. In addition, media will be used in case studies, in seminars, in laboratories, in shops, in recreational areas, and in the many specialized facilities that make up the school and college. They will be available for learning of many types and variations, and will not be restricted only to mass instruction or independent study.

16. If any one development is necessary in media, it is the expanded use of a systems approach for the design and planning of learning to enable using media in the most creative and beneficial way. This implies extensive educational research and evaluation (possibly some of our great data processing potential can be turned to analyzing the results of experimentation), and equipment developed in response to need based on extensive research in the uses of media. Some such research must occur in the teachers colleges in order for them to establish a forefront role in education.

17. And what about the costs of educational research and development? Some find them prohibitive and impeding. Others feel more optimistic.

We talk about the cost. We have perhaps two million students taking ninth grade algebra, in our country. If we could devote \$1,000,000 to developing an instructional system for the best possible method we can design for teaching algebra, we could amortize this cost of \$1,000,000, just to take a rough figure, at 50¢ per student in only one year. Think what we could do with 2 or 3 or 4 years. So, I think our cost barriers are rather questionable.

In summary, the trends indicate an expanded role for media in many more kinds of learning situations. More equipment, doing more things more economically is part of the future, as are teachers and specialists with unique roles in the development and use of media. There is also need for conscious effort in designing learning to make the most effective use of media and to develop media to meet well-established performance criteria and roles. All of these have significant implications for school building design.

Uses of Teaching Machines

When teaching machines were introduced they were hailed as the machine that would replace teachers and revolutionize education. Programed learning continued but the machines diminished in importance. Now teaching machines are making a comeback. This time they are tools to teachers for promoting better instructional programs. Certain types of activity can be taught well on these machines. The following article discusses four ways in which teaching machines can be used.

If we are taking individualization seriously, we will, of course, put all the materials under the total control of the individual. All these new systems anticipate making it completely possible for people to do things by themselves. Otherwise, individualization doesn't mean anything when you translate it into principles for media development.

12. The future should see the classroom teacher better prepared for and more sympathetic toward the use of media in day by day instruction. Schools of education will revamp or broaden their curricula, more in-service programs will be provided, and the teacher will find wide professional acceptance of media.

13. Because of the intellectual challenge and potential creativity necessary to meet the challenges of media in education, a specialty group of educators will develop which is highly skilled and highly motivated in their uses. These persons will be more than technicians; they will be media-pedagogists who will plan and design learning situations that will bring the greatest value from media. These specialists will be supported, as will all teachers, by technicians knowledgeable in hardware, its operation, maintenance, and repair.

Rounding out the supporting team will be the production specialists well versed in effective television production, film making, graphic production, programming, audio recording and radio.

14. In response to amassing information and the uses of media will come economical systems for storing and calling up information. However, these systems will be developed and will become practical only for information for which there is great demand. It is inconceivable that there will ever be a time when all information, regardless of remoteness and limited application, will be readily accessible through high speed retrieval systems. Dial-up systems for desired information are coming, but the information dialed will be of the "ready reference" type.

We've been reading a lot of things lately by people who propose complex systems of dialing so that the student will be able to sit in his carrel and have access to any recorded information that he needs, simply by dialing it. If you analyze it, though, this becomes a very complicated production and design problem. Let's say that there are maybe 2,000 items—tapes, films, etc.—to which a child in a carrel should have access. The ideal thing, and I think what many of us assume when we think of an ultimate dial system, is to have an infinite number of information sources all in operating mode all at the same time. This is an impossibility. There will have to be compromises all along the line to make this kind of system practical.

15. Information in many forms will be available for use in many different kinds of learning situations. The current emphasis on the learning resources

Because students are sent to the center during study periods, no class time is missed. And because (as experience has proven) the machines can teach remedial grammar better than teachers, no teacher time is wasted during class sessions. The students can even tell the teacher when the problem is solved, since machines constantly test them and indicate the results.

Slide-rule usage

When advanced students reach the point where they must learn how to use a slide rule, they work with a special slide-rule program on the machines. Here again, they're assigned to a machine during a study period and, again, work in sittings of about 20 minutes. Usually, three or four sittings are sufficient.

"The slide rule is a very basic tool," says one teacher. "Since the programs and machines do such a fast, thorough job of teaching, I don't have to spend one or two class periods on a relative rudiment. In fact, I've *gained* time since we started using the machines."

2. UNDERACHIEVERS

In the North Carolina Advancement School, Winston-Salem, N.C. (a school for underachievers), three machines in a separate room are used to teach the boys mathematics. They work for 20-25 minutes, sometimes for three periods a day.

Initially, a weak student worked alongside a strong student at the same machine. However, it was found that the strong boy dominated his partner and made cooperative selection of answers an unsound method. Now the boys work alone at the machines though, because they're underachievers, they receive additional help from instructors.

According to instructors, the machines quickly give them good insight into how quickly the students can learn. And so the boys feel that they're working at a "fair" level, not an arbitrary one.

While the staff feared that motivation would be a problem with underachieving students, the reverse has proved true. Says a department head, "The boys like the fact that they're working with something *different*." The school hopes to add two more teaching machines sometime this year.

3. DROPOUTS AND ADULT RETRAINEES

In Spray, N.C.'s Leaksville-Rockingham County Industrial Education Center, high school dropouts and undereducated graduates try to work up the skills they need in order to get jobs. Six teaching machines, arranged

FOUR WAYS YOU CAN USE TEACHING MACHINES *

Four years ago, teaching machines, according to their biggest boosters, were going to "revolutionize" education. They were going to take over the teacher's job, render his classroom assignments obsolete and turn out a series of the best-educated students ever to walk the earth.

Like other placebos, this one quickly lost its air of splendor. It soon became obvious that teaching machines were nothing more than hardware. And hardware can't teach. Furthermore, teachers didn't take to the machines with any dispatch: Who befriends his replacement?

What did initially hold out promise was the idea of programed instruction—the method of ordered questions and answers that the machines used. But precious few of these "programs" were able to teach well, and those that did gave suitable results whether or not they were used with machines.

Four years of near silence followed the early fanfare, and teaching machines were no longer referred to as substitutes for classroom personnel.

But now the machines are making a comeback—in a new role. They're being discovered again, this time as one more tool to be used by—not instead of—the classroom teacher. Instead of taking over classes, they are being used to help individual students solve specific problems. Instead of teaching whole courses, they are presently single units. Instead of threatening teachers, they are helping them to do a better job. Here are four situations in which teaching machines are playing their new role.

I. ACADEMIC STUDENTS

When English teachers at Cedar Falls, Iowa, High School notice a student having difficulty with grammar, they send him to a special learning facilities center located in the school library. There, an assistant librarian helps him to select programs for one of the two Autotutor teaching machines.

The students work on their own, generally for no more than 20 minutes at one sitting. Sometimes this is all the work required to solve the problem. Other times, three, four, even a half dozen sittings are necessary, depending on the student's ability, the amount of material to be learned, and the difficulty of the subject matter involved. Efforts are made to limit the scope of subject matter studied on the machines to very specific areas: adverbs, commas, parenthetical phrases, etc.

* FROM *School Management*, December, 1965, pp. 100-102. Reprinted by permission of *School Management*. Copyright 1966 by Management Magazines, Inc.

Airborne Television

The spectacular Midwest Program on Airborne Television Instruction (MPATI) has been one of the remarkable innovations of our time. A conclusion regarding the success of the program depends upon the person making the evaluation; however, there are basic conclusions regarding airborne television. They are presented by Mendel Sherman.

MPATI'S PROMISE, A SUMMING UP *

Mendel Sherman

Early on an overcast morning in May, 1961, a four-engine DC6AB, loaded to capacity with electronic gear and fuel, pointed its black radar-equipped nose into a threatening storm cloud and arrived, after ninety minutes of spiraling flight, at a point 23,000 feet above the tiny, slumbering town of Montpelier, Indiana. While the plane flew an irregular figure eight, its two UHF transmitters proceeded to televise lessons in biology and elementary school science over Channels 72 and 76 to the sprinkling of schools in a 200-mile radius which were equipped to receive the telecast. During the remainder of that week and ever since during the academic year, lessons in twenty-one subject matter areas or levels were televised by means of video tape and the two ultrahigh-frequency transmitters.

Spectacular though this phase of the Midwest Program on Airborne Television Instruction has been, its importance is eclipsed by the efforts to program content and methodology which would be acceptable to teachers in 13,000 schools in a six-state area. The divergent reactions of teachers and students using the same television program, as revealed in the two articles preceding this one, suggest that the programs have met neither with universal approval nor universal disapproval. To one of the teachers the thought of using the history program as a steady diet is so objectionable that he will consider leaving the teaching profession rather than accept TV as a general method of teaching. To the other the history program is one of the best aids made available during the past ten years. The evaluations of these two teachers and the reactions of their classes are undoubtedly representative of many using the MPATI history courses. Why the great range, with an almost violent reaction at the one extreme?

* FROM *Phi Delta Kappan*, May, 1962. pp. 326-30. Reprinted by permission of *Phi Delta Kappan*.

in one room, serve day and night students. Day students are limited to 45-minute sessions. Night students—many of whom drive as much as 50 miles after work to reach the center—are allowed to use the machines for as long as they can stay awake and operate with some alertness.

The students work alone (they don't want to go back to school and classes—they want to qualify for jobs) at their own rate. The mathematics they study is geared to the basic knowledge they need for the jobs they want. The same is true of other subjects. When they've mastered the fundamentals, personal instruction brings them the more complex training needed for work as, say, a draftsman or an electronics technician.

Motivation is, in the words of a staff member: "No problem. The students have a technical bent, and they're fascinated by the machines. Pushing the answer buttons is fun. And none of the teachers feels jealous of the role played by the machines. After all, we still must show the students how to apply the basic skills the machines help them to learn."

4. DISTURBED CHILDREN

The Wisconsin State Training School for Boys, Wales, Wis., holds boys between 12 and 18 who are detained by the state for training. They had been rebelling against authority all their lives. They resented "interference" by adults and were uneasy when adults were present. To overcome this problem, 39 of them were left to face the machine alone (though an official lingered far at the back of the room).

Six students used the machine at one time for about 25 minutes. Conditions were hardly optimum, with three boys doing the work on the machine and the other three watching and giving comments. But the boys became interested; after two days, students were allowed to choose a math program and use the machine individually. Some used the machine for one 55-minute period, others used it for two, three and even five—not because they had to, but because they wanted to.

Although many of the boys later admitted that they wanted to use the machine to get out of less pleasant pastimes, others became truly absorbed. One boy, who had been "unreachable," spent 14 extra hours working with the machine before he left the school—and this meant getting up more than an hour earlier to do chores before classes began.

According to one instructor: "These boys have been failing for a lifetime. Perhaps because of this, they're very competitive. So, when they sit down in front of the machine, they try to 'beat' it. And they often win. The machine can't give the impression that it's disapproving of them, threatening them. It's a defenseless part of the grown-up world. It can be beaten. And when the boys do win—when they consistently give correct answers—they beat their own lack of learning."

have different concepts of what should be included in them. Some look upon television as a means solely for bringing the world into the classroom. Events, places, and phenomena which cannot otherwise be brought to it are considered to be the only appropriate TV content. Subjecting students to a televised lecture when the teacher in the classroom can do the same thing is thus completely unacceptable.

Perhaps more serious is an objection to the monolithic quality of TV instruction. The notion of 1,000,000 students sitting in thousands of classrooms listening to the same teacher is abhorrent to those who delight in what they consider healthy pluralism and divergence in America. This point of view was well expressed by William Van Til in the February 17, 1962, *Saturday Review*. He wrote, ". . . The real problem is whether the device will realize the gloomy prophecy of an old Vanderbilt University professor who once said at a meeting of the AAUP, 'Gentlemen, the time is coming when one Harvard University professor will determine through his history course on television what history is taught in the United States—and even if it's Arthur Schlesinger, Jr., I say the hell with it!'" Van Til wants imaginative educational TV to "provide learners with a magic carpet to a wider world of experience made at once more expansive and more closely detailed."

The desire to use television as "a magic carpet to a wider world of experience" is fairly universal among those advocating instructional television. This contribution to learning is hardly confined, however, to the relatively new medium of TV. All instructional materials, including books, are supposed also to be magic carpets to a wider world of experience. There seems to be an assumption that television's role is that of bringing into the classroom a part of the wider world of experience that cannot be so introduced by other means. Thus restricted in purpose, it is small wonder that a program composed to a great extent of lecture, chalkboard drawings, and readily available illustrative materials will not meet with universal approval. This restriction placed upon television is not associated with other media which happened to achieve a squatter's right in the media or methods field. Very few voices suggest that books or lectures or committee meetings do that which cannot be done by any other means.

Teachers who approve of television programs which seem unacceptable to others include at least three implied premises as their basis for desirable TV content: (1) Bring the world into the classroom—distant places, drama, complicated scientific experiments, etc.; (2) bring into the classroom that which the teacher could do but probably will not because of time limitations or other obstacles; (3) present some methods, techniques, and utilization practices which provide the teacher with new ideas or approaches to classroom instruction—in other words, in-service education.

When the studio teacher lectures, writes on the chalkboard, or presents some simple materials which are readily available to the classroom teacher,

Perhaps answers lie in the individual teacher's basic assumptions related to (1) what constitutes 'good teaching, (2) what should be included in a TV program for classroom use, and (3) his image of the teacher's role in the teaching-learning process.

During their years of schooling, experience, and in-service training, all teachers develop assumptions about their role in the teaching-learning process. These assumptions become the basis for evaluating any instructional material or experience, including televised programs. A teacher who believes in reflective thinking as a major goal of teaching and relies on the "discovery method" will object to a presentation by the studio teacher which provides too many answers, which supplies the product of thinking rather than stimulating the thinking process. Such teachers demand programs which will raise questions and present genuine problems for class consideration. On the other hand, some teachers seem well satisfied to have the studio teacher function as a presenter, an explainer, an interpreter—one who gives answers.

When examined closely, negative reactions by teachers to instructional TV (or televised instruction, as it is more appropriately termed) are basically a protest against program content and methodology. TV as a medium of instruction is neither good nor bad. While it modifies messages because of its unique characteristics, in general it accepts what is put in at one end and delivers it at the other. There is nothing about the medium per se that will change a Shakespearean play or a mathematics lesson into something entirely different. Those protesting most violently against television will often end their tirade by describing the type of televised program which would make a significant contribution to their instructional program. Thus the objection is not actually to the medium but to the message carried by the medium.¹

SEPARATING 'HARDWARE' FROM CONTENT

We must somehow learn to separate the "hardware" from program content. *Henry the Eighth* and an episode from "Have Gun, Will Travel" are ushered into our living room by the same vehicle. Our evaluation should be of these separately as learning experiences. We learned long ago not to criticize books per se but to evaluate the content of each book individually.

Another reason teachers react so differently to TV programs is that they

¹ Admittedly, there is no satisfactory answer to those who object to the lack of class feedback in video-taped television lessons. A student cannot interrupt the MPATI teacher or affect his delivery by a puzzled expression. The classroom teacher can help in discussions which follow the telecast, however. Also, the experienced studio teacher can anticipate a surprisingly large number of puzzled moments and adjust his presentation accordingly.

1. Televised programs can be transmitted from a plane to a sufficient number of potential users for the program to be economically feasible.

2. An increasing number of schools are using MPATI lessons. At present, the total number is approximately 2,500.

3. Except for a few problem areas, the technical quality of reception can be very good to excellent, provided that the local installation is properly constructed. In other words, the "hardware" aspect of the experiment is successful.

4. There is sufficient commonality in the instructional programs of the six-state area to provide a basis for televised programs which will be acceptable to a large number of teachers.

5. While many programs are received with enthusiasm, continuous improvement and revision are needed.

6. Although there are many suggestions for improvement, very few administrators and teachers who have used the programs suggest that the experiment be discontinued. Evaluations sent to MPATI by using teachers indicate general approval of the project.

7. In general, the community approves of the use of the programs by the schools. Some administrators have been surprised at the interest and support from parents and community leaders.

8. Smaller schools and school systems are among the most ardent supporters of MPATI, but individual schools in the larger systems are also highly interested.

9. The personality of the studio teacher can be transmitted effectively by television. It is possible for the studio teacher to achieve a high degree of intimacy with the classroom teacher and the children.

THE SCHOOLS ARE DECIDING

The entire MPATI project is now entering a crucial stage in its development. The initial two years of foundation support end in the summer of 1962, and MPATI's continuation depends upon acceptance by the schools and their willingness to supply the funds and participation needed. MPATI is in the process of becoming MPATI, Inc. On January 12, 1962, incorporation proceedings were initiated. The corporation is being transferred, "lock, stock, and barrel," to the schools using the program. By the end of June, 1962, the member schools in the six-state area will, through their board of directors, own two TV transmitters, two planes equipped for broadcasting, and several thousand video-taped lessons. They will have access to two television channels which, commercially, could be worth one million dollars each. A staff with unique experience will be at the bidding of the board of directors to carry on the program with any modifications the member schools demand. The video-taped lessons, for example, can be

it is an understandable reaction for the classroom teacher to remark, "I can do that myself." Perhaps as Keith Tyler suggested, however, this indicates that the classroom teacher "... conceives himself fundamentally as a purveyor of subject matter . . . in telling and showing. . . ." ² Forgotten is the oft-expressed desire for more time to counsel with students, to meet individual differences and interests, to do the thousand and one things teachers would do if they but had the time. With the many hours available to prepare for each lesson, the studio teacher should be able to "show" and "tell" some things more effectively than the classroom teacher. If there are classroom teachers who can do it better, organized talent hunts should reveal them. Then we must hire them to be studio teachers.

PURPOSES AND CONCLUSIONS

When an MPATI plane made the first flight to its station above Montpelier a year ago it carried with it the original purposes which, after years of planning, had emerged as the Airborne project. Probably the two most important purposes related to instruction are: (1) Bring resources not readily available to the classroom; and (2) raise the quality of instruction.

That the first purpose has been at least partially served can be seen in the many school children who have had their first instruction in a foreign language. At least 35 per cent of them would have had no such instruction because of the lack of language teachers. Many pupils now speak with a fluency that amazes parents and foreign language teachers alike. The programs in science and many other of the twenty-one subject matter areas or levels also have brought new experiences that were not previously available.

Raising the quality of instruction is difficult because of the problem of defining quality teaching. Administrators in school systems throughout the land, however, have long assumed that observation of methods in the classroom other than their own would provide teachers with new ideas and thus result in better instruction. Provision is made in many school systems for two days of released time for any teacher who wishes to visit another classroom. This type of in-service training is being provided by MPATI to an extent not heretofore possible. Every teacher, from the most modern school plant to the most isolated country school, can observe the methods, procedures, and materials used by carefully selected teachers from all sections of the nation. This visit can be made not once or twice a year but almost daily if desired.

As a result of the two years of MPATI planning and operation, it is possible to draw several conclusions with some confidence:

² I. Keith Tyler, "The Impact of Instructional Television on Teaching Roles and Functions," *Audio-Visual Communication Review*, Vol. 10, No. 1 (January-February, 1962).

Some of us are prone to expect more from each new school learning resource than it can or should produce. Others have reacted in the opposite direction, refusing to recognize the potential of a newcomer. Our real problems remain what they have always been—a need to study the what, the why, and the when of instruction; to study the individual, how he is constructed, what his needs are, how he learns. When we know the needs of the individual in his societal setting we can examine the entire gamut of educational resources from which to select and fashion experiences to meet these needs. When we know the characteristics of both men and machines and our educational objectives we may yet achieve a coordinated learning arrangement or system in which each learning resource will contribute to its fullest potential. When this is done there seems little doubt that television, with its ability to reach almost unlimited numbers instantly with the best that we can devise, will be in the front rank.

TV Research and Findings to Date

MPATI provides a rich field for individual and institutional research. A team from Ohio State University is studying the role of the classroom and the studio teachers in the use of televised instruction. Several studies are under way at Indiana University, including: (1) *A Reflective Approach to Teaching United States History Via Television*, (2) *Relationship Between Authoritarian Personality and Attitudes Toward Educational Television*, (3) *Teacher Competencies Essential in School Instructional Television, with Implications for Pre-Service Teacher Training Programs*.

Despite more than 400 major studies during the past fifteen years, researchers have merely scratched the surface of problems related to televised instruction. A few of the tentative conclusions indicated by present research are:

1. Much information can be learned as effectively from TV as it can from conventional instruction.
2. Students of varying ability learn from TV; it is not uniquely appropriate to any specific ability level.
3. Students' and teachers' attitudes toward TV vary greatly. We have little evidence that learning is affected by the students' preference for or against TV.
4. Class size does not appear to be an important factor affecting learning by TV.
5. No subject matter area or grade level is either especially appropriate or inappropriate for TV.
6. Recorded programs are about as effective as live presentations.
7. Students prefer an experienced instructor on TV to an inexperienced one in the conventional classroom.

used in their present form, can be revised, or can be "wiped clean" for a completely new approach.

The projected annual operating budget of \$3,750,000 will enable MPATI, Inc., to expand until by 1965 there will be four or six channels with the number of program hours tripled or quadrupled to a possible total of 180 per week. Thus programs can be repeated several times during the week to permit greater flexibility for schedules in the individual schools. The annual operating budget will be financed partly by the member schools and partly by a renewed grant of \$7,500,000 announced recently by the Ford Foundation. Funds from the grant are apportioned in decreasing amounts over a four-year period. During this time the increasing number of member schools will provide the added revenue needed to carry on all operations.

For the modest sum of one dollar per pupil, or the cost of a three-ring notebook, a school can join MPATI, Inc., and help decide program content and all aspects of its administration and operation. A school of 500 students, for example, can pay \$500 (less \$100 for charter members—those who join by October) and enjoy the complete teaching output of the outstanding French teacher from Detroit, Monsieur Zeff, the Spanish teacher from Florida, Mr. Lueras, and the biology teacher from Cincinnati, Mr. Smalley. At no added cost they can select from any of the additional twenty-one courses which appeared on the MPATI schedule during the second semester of 1962. Equally important, the mathematics teacher and the science teacher can observe the latest procedures, discoveries, and materials in their rapidly changing field as prepared by a studio teacher with ample time and consultant assistance.

At present the MPATI lessons are generally of the major-resource type. The course is presented in a series of integrated telecasts, with the studio teacher taking up perhaps half the class period and the classroom teacher using the remaining time to carry on activities which the studio teacher cannot do as effectively. Preparation of the programs has been confined for the most part to the studio. This has imposed more of a hardship in some areas than in others. The foreign language lessons seem not to have suffered noticeably by this restriction, but the film clips, photos, cartoons, and artifacts are often inadequate in other areas. Students need to see the "far away or long ago" rather than hear the studio teacher tell about them. But this shortcoming can be corrected as soon as member schools make their desires known through their board of directors and accept financial responsibility for supplying additional materials.

Other problems can be solved also, but the biggest problem is that of deciding the proper place of television in the entire educational process. Television is certainly not a panacea for all our educational ills. As a medium of communication it can only distribute what we put into it. A protest against TV is usually a protest against content—against the type of teaching or the objectives sought.

manuals, and workshops, of questionnaires and other feedback devices, it is the consensus of ITV people that not nearly enough has been done to integrate television into the classroom, either into the average teacher's day-to-day program or, in combination with other instructional aids, into the total curriculum and educational purpose of the school or college."

They blame this on school administrators and classroom teachers, quoting one ITV adherent as having told them: "Your typical classroom teacher cares much more about what her principal says and wants than she cares about what signal she gets from WXXX."

Despite the brutal candor in discussing ITV's deficiencies, the authors do have much to say about good programs and stations. And they wind up with this observation:

. . . If television is to fulfill its potential for enhancing the educational process it will have to be used flexibly and imaginatively to encourage individual learning and it will have to take its place in an instructional system where the classroom teacher plays a new and critically important role as the director of learning.

Emphasis on Computers

Computers and Education

The computer is a tool—a revolutionary tool, yet still a tool. According to Harry F. Silberman, it will liberate administrators from information overload and clerical details. It will schedule, coordinate, and routinize book-keeping problems. It will have an effect on the instructional process and the manner in which materials are prepared. The workings of a research laboratory at Systems Development Corporation, which utilizes the computer for many of these activities, is also discussed in the next selection.

THE DIGITAL COMPUTER IN EDUCATION *

Harry F. Silberman

Thinking about computers in education gives rise to three basic questions: First, what is a computer? Second, what can a computer do? Third, how

* From *Phi Delta Kappan*, May, 1962, pp. 345-50. Reprinted by permission of *Phi Delta Kappan*.

Evaluation of ITV

An interesting evaluation of instructional television was given in a 95-page report by the Fund for the Advancement of Education. A brief review of the report by Education U.S.A. indicates that ITV works as a teaching tool, but mediocre teaching is too prevalent. The success of ITV depends on its use by the creative teacher.

THE 21-INCH CLASSROOM *

Instructional television has proved that it works as a teaching tool, but it is still occupying only a marginal role in the nation's educational system. The 115 educational television stations in the United States have instructional (ITV) programs which "enroll" in varying degrees about 11 million persons—7.5 million in elementary grades, 2 million in secondary, a little more than 600,000 in colleges and universities, and about 1 million whose grade levels are not known. Yet, on the balance, and despite notable exceptions—ITV isn't very good.

ITV's most conspicuous contribution to education has been in fact that it has ". . . displayed in public what had heretofore gone on behind too many closed classroom doors—uninspired teaching. . . . As it has been used to date, television cannot upgrade the quality of American education; it can only alleviate the problems created by having too few teachers, too many students, and swelling curriculums."

These conclusions are from "Learning by Television," 95-page report published by The Fund for the Advancement of Education (477 Madison Ave., NYC 10022). Authors are Judith Murphy and Ronald Gross, co-editors of the recent *Revolution in the Schools*. In introducing them, Alvin C. Eurich, president of Aspen Institute for Humanistic Studies, says they have focused correctly on education, rather than television. Eurich adds that they found two principal reasons for ITV's limited acceptance: quality of transmitted instruction, and the way it is used in the classroom.

On quality, the authors cite a survey made by the National Instructional Television Laboratory which dealt with 150 filmed or taped series of programs available to elementary schools. NITL, which acts as an ITV library at Indiana U., found only a "startling" 9.2% of these fit for distribution with most of the rejects turned down for "instructional ineffectiveness."

On use in the classroom: "Despite the proliferation of teachers' guides,

* FROM *Education U.S.A.*, October 20, 1966, p. 43. Copyright 1966 by the National School Public Relations Association. Reprinted by permission of the National School Public Relations Association.

teaching machines being used for educational research in different parts of the country. Some of these machines are capable of providing individual instruction to many students simultaneously. They furnish extra remedial instruction to the slower student and give the faster student more difficult material and move him along more rapidly. Research is being conducted on dramatic elaborations of these machines. For example, the time may not be too far off when information retrieval will become a part of the computer-controlled teaching system. This will enable the student to ask questions of the machine by dialing up needed information. These machines may also have the capability of reading print and automatically encoding information into its electronic files. If the material happens to be in a foreign language, the machine might translate that language into the language of the student. Such machines would be capable of displaying, on individual request, information to students at each desk in a classroom. Periodically, the machine would test the student, diagnose his difficulty, and present appropriate remedial material. Research is also being conducted on ways of using the computer to help in the preparation and assembly of long articulated sequences of instructional material.

The third operation which can be performed by a computer is simulation. One of the truly important features of a computer is that the program which tells it what to do can assume such a variety of forms. A computer program can be made to mimic the behavior of many things. For example, the computer can act much like a cluster of neurons or some biological organ. It can be programed to approximate the learning characteristics, or the problem-solving behavior, of an individual student or of a group of students. In fact, the computer can be programed to simulate an entire school organization, a business, an industry, a cold war, or any other part of our environment.

WHAT'S THE GOOD OF SIMULATION?

But what good does it do us to simulate any of these things? There are at least three benefits in the field of education. First, we can learn more about the system which we are simulating. For example, by progressively improving a program which simulates the problem-solving behavior of a human, we can discover more about how people solve problems. Second, a simulation can benefit us by serving as a teaching tool. For example, a computer program can be written to simulate the learning characteristics of a classroom of students. A real, live teacher can be presented problems related to teaching this hypothetical class of students. Decisions made by this teacher are then entered into the computer. The computer calculates how the teacher's decision would affect the simulated class and notifies the teacher of the consequences of his actions. Similarly, a school can be

will the advent of computers affect education? With respect to the first question, the computer is often falsely viewed as a mechanical brain with supernatural powers. Actually, a computer is little more than a grown-up hand calculator. It will not create new ideas and we get out of the machine pretty much what we put in. What makes a computer function at all is a "program" written by humans. The program is a long list of detailed instructions that outline the task the computer is to perform. The computer will only do what these instructions tell it to do. The program and other data are entered into the machine through an input device and are stored in computer memory. Computer memory may be viewed much like the tape in a tape recorder. A control unit then executes the instructions in the program. For example, the control unit may transfer data from the memory into a processing unit where the data are subjected to a variety of arithmetic and logical operations. The results of these manipulations may then be transferred to a suitable output device which might print messages on pages, punch information on cards, or display a message on a TV screen.

CALCULATION, STIMULATION, SIMULATION

What can computers do? Computers can perform essentially three operations: calculation, stimulation, and simulation. In the area of calculation, the computer is a marvelous labor-saving statistical worker. It will help us salvage much of that useful information wasting away in our record files. In school systems, the computer will take care of attendance records, bus scheduling, processing test scores, grade reporting, registration and scheduling, fiscal accounting, preparation of class lists, and numerous other burdensome clerical tasks. Computers are being used in a number of school districts to assign pupils to courses and rooms. Flexible scheduling is being accomplished by computers in a few minutes during the week before school begins. This function is a particularly important aid to the new methods of individualizing instruction, which have been hampered by the enormous task of arranging the complex schedule required for such programs. Fixed period lengths, fixed class size, and even fixed teaching procedures and room designs are results of, and testimony to, the complexity of performing the scheduling job by hand. Resistance to desirable innovations, such as individualized instruction, may not stem from conservatism as much as from the lack of solutions to the data-processing problems accompanying those innovations.

Another operation which can be performed by the computer is stimulation. The machine is capable of presenting material to children, requiring them to respond to the material, evaluating these responses, and providing the children with additional information depending on the nature of their performance. There are now at least a half dozen computer-controlled

sary. The computer will also be used as an indispensable tool in such long-range planning.

Third, curriculum changes will be required, because the computer will accelerate the rate at which general knowledge becomes obsolete. The basic theory and structure of knowledge in all the sciences is rapidly changing as a result of using the computer to analyze research problems which were heretofore insoluble. Changes in the structure of knowledge in the different subject areas require corresponding changes in the school curriculum. Automation has also levied new skill requirements on the graduates of our schools which would be reflected in their educational program. Vocational education programs, for example, should provide experience with electronic data-processing equipment. The industrial arts curriculum may well include a simulated automated industry so that youngsters will be exposed to the realities of their future world.

Fourth, dramatic changes will be made in methods of preparing instructional materials. The trend will be toward much greater effort on the *preparation* of instructional materials in addition to the presentation of those materials. The recording and analysis capabilities of the computer will be used to assist in the assembly, preparation, and quality control of instructional materials. Also, we can expect to see a much more empirical or scientific approach used in their development. Specification of educational goals for these materials will become much more precise. The improved effectiveness of the instructional materials resulting from the new procedures will radically modify instructional practices. For example, greater emphasis will be placed on maintenance or retention of learning in contrast to its acquisition. Grading practices will probably emphasize learning rate rather than total mastery.

Fifth, education will become more democratic with the advent of computers. By this I mean that education will be more responsive to the individual student. Because computers provide better access to student data, the performance of the individual will be given greater weight in educational decisions.

As a by-product of the recording and analysis capability of a computer, the educational program will become more objective and accountable and therefore more responsive to social needs.

Finally, far greater individualization of instruction will be obtained. Indeed, if computers help us to solve educational problems, the long-term benefits to mankind may exceed even those which automation has provided to industry and scientific research.

simulated and problems can be presented to a live school administrator. In this type of training, the teacher or administrator is not taught what to do, but rather learns to predict the consequences of his decisions.

Simulation offers a number of advantages over "real life" as a teaching tool. Much greater control of the teaching situation is possible, allowing the presentation of unusual problems which occur only infrequently in the real world, but are nevertheless of educational importance. It is also possible to try out potentially hazardous procedures or radical innovations in a simulated setting without harmful consequences. Time may be accelerated by providing in one training session experiences which would have normally taken a full year. Information about the consequences of the student's behavior which is provided to the student may also be related to the situation in which the behavior occurred, since the simulated situation was completely pre-planned.

A third benefit from computer simulation is in advanced educational planning and decision making. By simulating an educational system for a given region and inserting such information as socio-economic data, population trends, and other statistics, we can cycle the program ahead and generate predictions about future educational needs. This will assist us in long-range educational planning. Facility planning, salary bill projections, and other optimization problems are already being solved with the use of computers.

To be sure, the simulation program is only a theory about how the system being simulated operates. But the accuracy of simulation is constantly verified by comparing the simulation with the real world and continually altering the program to improve the simulation. This, of course, is the method used to improve any scientific theory about how things operate in the real world.

THE EFFECT OF COMPUTERS ON EDUCATION

How will the advent of computers affect education? I can think of at least a half dozen changes which will occur. First, school organization will move from a man system to a predominantly man-machine system. In other words, there will be a division of labor, with man performing functions appropriate to his skills and the machine performing the more routine functions. This change will likely proceed from the top down, such that the elementary schools will be the last to benefit from automation.

Second, educational administrators will be liberated from much of their information overload and burdensome clerical detail. The reduction of scheduling, coordination, and routine bookkeeping problems will free the administrator to deal with more significant problems, such as long-range planning. Progress by day-to-day expedient action will no longer be neces-

learning environment at the instructional station and the abundance of objective evidence available in collected data.

1500 INSTRUCTIONAL SYSTEM

The IBM 1500 Instructional System and the 1500 Operating System have been designed and programmed especially for CAI. The Instructional Stations, for example, can be individually tailored to meet the requirements of different student groups. In addition to their use with students, Instructional Stations may be used as author stations for developing and revising courses, or as proctor stations for system operation and course administration. The following features are available with each station:

INSTRUCTIONAL DISPLAY. This versatile Cathode Ray Tube (CRT) display allows presentation of instructional material using an expanded character set of 128 symbols, including upper and lower case alphabetic characters, numerical characters, and special characters. All characters can be positioned for use as subscripts and exponents. Words may be underlined for emphasis or an indicator may be "stepped" along the face of the display to emphasize words or phrases.

INSTRUCTIONAL DISPLAY KEYBOARD. Student responses via this keyboard are displayed for student verification of his entry to the system. A "cursor" moves across the face of the display ahead of keyboard entries to show where the student's next key depression will be displayed.

LIGHT PEN. The student can respond to displayed text or an audio message by pointing the light pen at the face of the instructional display. A small line of light appears on the instructional display to the right of the light pen. The student moves the light pen across the face of the CRT to his selected answer. The coordinates of this location are then interpreted by the system to determine which course material will be presented next.

TYPEWRITER. Course material is automatically typed for student review and analysis. The student's keyed response is also typed on paper as it enters the system.

FILM DISPLAY. Film images are displayed under control of the course in black and white, or in full color. Interchangeable cartridges containing film strips are inserted at the student station. The film, which contains up to 1000 images, is automatically threaded by the projector.

AUDIO PLAY/RECORD. Up to two hours of variable length messages can be prerecorded on interchangeable tape cartridges for each station. The

Computer-Assisted Instruction

In the schools of the future some instruction will be done by computer. Such a program is currently in developmental stages with major equipment companies developing the hardware and universities and publishing companies developing the software or programs. One publishing company is investing two million dollars in its first ten programs.

Computers will not only become larger, they will also become smaller and less expensive so that individual schools may own or have access to them. One of the first of the smaller systems that can be used for instruction, research, and scheduling (although designed primarily for the complex task of instruction) is the IBM 1500 Instructional System. A description of this system is presented next.

IBM 1500 INSTRUCTIONAL SYSTEM: SYSTEM SUMMARY *

COMPUTER-ASSISTED INSTRUCTION

A relatively new method of instruction with many of the advantages of individual-student instruction is called Computer-Assisted Instruction (CAI). This method enables the instructor to use a computer and a variety of instructional devices for the presentation of instructional material. The material is presented individually to a number of students who are located at instructional stations. Each station may present instructional material via an image projector, recorded messages, and dynamic character displays. Student responses to instructional material are entered via display keyboards, typewriters, light pens, and audio recordings. Responses may range from simple yes-no answers to those that require complex construction. Thus, CAI together with instructional programs provides:

- Computer analysis of each student's responses so that the instructional program may control the presentation sequence of instructional material.
- Remedial material that the student has either asked for directly or that his answers indicate he should have.
- Updated student records.
- Greater precision in the evaluation and grading of each student. The subjective aspect of his evaluation is diminished due to the controlled

* FROM *IBM 1500 Instructional System: System Summary*, 1966, pp. 1-5, 7. Reprinted by permission of International Business Machines Corporation.

The user's identification number is referred to by the operating system to determine his identity—whether author, proctor, or student. The operating system then uses the computer for communication between the author and the proctor, and the proctor and the students.

In summary, the operating system:

1. Enables the student to take a course, according to his own abilities and needs, and gives assistance to the student as provided in the course content.
2. Accumulates and records the performance records of each student for later analysis.
3. Enables the author to write, correct, and evaluate course material.
4. Supervises the presentation of course material.
5. Enables a proctor, who operates and oversees the system, to undertake administrative routines.
6. Enables authors or programmers who are thoroughly knowledgeable with the operating system to add new and specialized capabilities to CAI.

A block diagram of 1500 system components is shown in Figure 1. The numbered steps listed below correlate with the circled numbers on the block diagram:

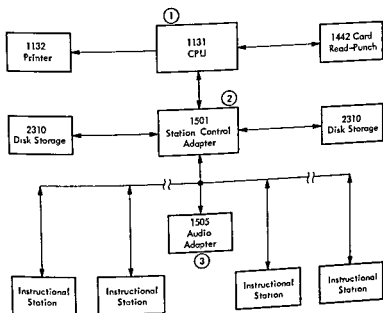


Figure 1. 1500 System Block Diagram. (Source: IBM 1500 Instructional System, System Summary, 1966, p. 5. Reprinted by permission of International Business Machines Corporation.)

1. The IBM 1131 Central Processing Unit (CPU) contains the computer and the decision making elements. The CPU has an operation console, including a keyboard for system input and a printer for output. One interchangeable disk cartridge and 8192 words of core storage are

cartridges for all stations are inserted in the Audio Adapter unit(s). The tapes are self-threading. Student audio responses can be recorded and played back as directed by the course.

Interchangeable disk cartridges are used to store the programmed Operating System, the course material, individual and class performance records, and other administrative information. The Operating System facilitates student responses to the course material, course preparation and revision by the author, and system operation and course administration by the proctor.

The Central Processing Unit (CPU) acts as an intermediary between the student and the course material stored on the disk cartridges. For example, the CPU retrieves questions from storage, presents them to the student through the instructional display or the typewriter, compares the student's answers with those listed by the instructor, and then presents appropriate material or instructions.

While the computer is working on one student's problem, responses from other students are accepted by the system. The "traffic" of messages between students and the computer is directed by the Operating System. When a student's session is completed, the system saves restart information for the next session so that the student can continue the course at the proper place.

System Specifications Summary

1. Core storage containing 32,768 sixteen-bit words with 3.6 microseconds read/write time per 16-bit word.
2. Twenty-four basic CPU machine language instructions.
3. Eighty-column card input/output at rates dependent on operation and card read-punch model:

Maximum read—400 cards per minute.

Maximum punch—160 columns per second.

4. Line printer output: 82 lines per minute alphabetic and 110 lines per minute numerical (120 characters per line).
5. Up to five disk storage cartridges—one in the 1131 CPU and up to four in 2310 Disk Storage units. Each cartridge has a storage capacity of 512,000 words.
6. Up to 32 instructional stations.

OPERATING SYSTEM

The operating system facilitates the use of the 1500 Instructional System for computer-assisted instruction (CAI). Neither authors, proctors, nor students need extensive knowledge of computers.

displayed on the CRT to indicate where the next entry will be displayed.

A light pen is available with the 1510 for student response. For example, the student uses the light pen to select his answers when multiple choice questions are displayed. He merely points the light pen at the location of his selected answer number. The system analyzes the coordinates of the selected location to determine the student's response.

1518 Typewriter

The 1518 is an input/output typewriter. The course material is automatically typed for the student. He types his responses to the instructional system. The typed record enables him to check the accuracy of his typing as he makes his responses.

Maximum output is at the rate of 15 characters per second. Input rates up to 120 words per minute can be accepted from skilled typists.

1512 Image Projector

The 1512 contains an enclosed projection system with a 9 x 7 inch rear projection screen. An interchangeable film cartridge with a capacity of 1000 images or frames is inserted in the 1512 by the student or instructor. The film, which may be black and white, or color, is automatically threaded onto the projector when the cartridge is inserted. The system selects each frame for display as directed by the course. The address of each frame is verified as the image is projected onto the screen.

Audio Play/Record

Up to two hours of audio messages can be recorded for each student. Each message is addressed and can be up to 5 minutes long. Messages are selected by the instructional system under control of the course material. Student audio responses can be recorded for review by the student or the instructor. The two hour record time maximum includes both student recording and message recording.

The interchangeable audio tape cartridges are inserted in the 1505 Audio Adapter (Figure 1). An audio tape transport unit is installed in a 1505 for each instructional station using the audio play/record feature. Headphones (or speakers) and microphones, as required by the students and other system users, are supplied by the customer.

1505 AUDIO ADAPTER

The 1505 houses up to eight audio tape drives. Each audio tape drive consists of a magnetic tape transport system, controls for remote operation

- housed in the CPU. Up to 512,000 words can be stored on a disk cartridge (disk cartridges are easily interchanged). Core storage cycle time is 3.6 microseconds.
2. The IBM 1501 Station Control houses 24,576 additional words of core storage, the image display storage, and the controlling circuitry for:
 - a. The IBM 2310 Disk Storage which can contain up to 4 interchangeable disk cartridges.
 - b. The IBM 1505 Audio Adapter Unit.
 - c. Up to 32 instructional stations.
 Thus, the system maximums for on-line storage are 32,768 core storage words and 5 disk cartridges (2,560,000 words). The interchangeability of disk cartridges provides unlimited off-line storage.
 3. The IBM 1505 Audio Adapter contains the audio tape drives and controls for audio transmission to student stations and audio recording of student responses.

A description of each system component follows:

INSTRUCTIONAL STATION

The 1500 Instructional System provides for a maximum of 32 instructional stations. Each station can be used in any one of three modes: author, proctor, or student. The descriptions of the station components which follow are presented in the student mode. The available station components are:

1. The IBM 1510 Instructional Display
2. The IBM 1518 Typewriter
3. The IBM 1512 Image Projector
4. Audio Tape Drive-Play or Play/Record

All or various combinations of these components may be used by the instructional system, depending on how the author prepared the course.

1510 Instructional Display

The 1510 Instructional Display contains a rectangular cathode ray tube (CRT) for display of alphabetic and numerical characters. Graphics can also be displayed, such as mathematical symbols, brackets, etc. An emphasis indicator, such as "underlining" or a "moving arrow," can be used to emphasize or highlight any portion of the display.

A keyboard is available with the 1510 to facilitate the student's response and provide for the manual entry of data. The keyed characters are displayed on the CRT, thereby enabling the student to verify that the correct entry has been made. When keyed entries are being made, a "cursor" is

The use of a central information center in the home is but one step beyond what is already in experimental use or being planned for the school-room. And it was a central concern of a recent conference on the computer in American education sponsored jointly by the Assn. for Educational Data Systems and the Stanford U. School of Education. In a preliminary paper for the conference co-chairman Don D. Bushnell (Assoc. Dir., Research and Development, Brooks Foundation at Santa Barbara) described the central information center for school systems of the 1970's:

"These central archives will gather information from high-utility sources such as reports of experimental and test results, technical publications, patents, doctoral dissertations, government reports, etc. . . .

"Information centers will supply information of interest to the school superintendent and local administration such as data on economic and population trends, predictions on the outcome of projected bond issues based on past voting behavior. . . .

"The school or university of the 1970's will have a dynamic system of information retrieval serving the entire school system. . . . As an example, the dynamic IR system would index the content of a new document and mathematically select customers whose interest or information-need profiles indicate the content would be relevant to them."

Bushnell said that the application of computers to education is now entering the stage of time-shared computers, with on-line teletypes and cathode ray tube display equipment. Conference participants fully endorsed the idea of centralizing the "cumulative" experience of education through these means, but they sorted out some formidable problems: getting books, journal articles, and similar reading materials into machine readable form (an incentive might be to give royalties for usage of machine stored documents); improving the transmission of materials (the conference passed a resolution recommending that the Federal Communications Commission make wide band transmission facilities available to educational data and instructional systems at lower rates); and gaining acceptance locally of this new system of instructional communication. As one group report at the conference emphasized: "Every day the human lag becomes greater."

ADDITIONAL READINGS

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- DALE, EDGAR. "Technology is More Than Tools," *Educational Leadership* (December, 1963), pp. 161-66.
- GREENBERGER, MARTIN (ed.). *Computers and the World of the Future*. Cambridge: Massachusetts Institute of Technology Press, 1962.

by the instructional system, and manual controls for loading and unloading the tape. The tape for each audio tape drive is contained in a manually inserted cartridge.

The interchangeable tape cartridge provides for unlimited audio storage capacity. The cartridge is easily inserted and removed from the audio tape drive. There are four tracks on each tape. One track is used for individual addressing of each message. Three tracks are available for course material. One of these three tracks may be used to record student responses.

Each track allows 40 minutes of recording time. Thus the maximum recording times for student response and course material are 40 minutes and two hours, respectively. The maximum composite recording time for course material and student recordings is two hours. For example, one-half hour of student response time and one and one-half hours of course material can be recorded.

Computers and the Future

The following summary from Education U.S.A. further shows how the computer is changing education. Indeed, the computer is the most promising tool that the field of technology has yet devised to assist secondary school administrators with their problems. Its part in the revolutionary field of education is just beginning to be noticed.

COMPUTERS IN EDUCATION'S FUTURE *

In the Maryland countryside, within commuting distance of Washington, D.C., a new city is to grow with a built-in concept of computer communication that is absolutely revolutionary. Columbia City's proposed coaxial cable network would link more than 10,000 homes to a single community computer center, putting a large digital computer "on call" to every member of the family.

With this network system, a student could use the home TV set and a keyboard unit for homework fed by the computer, residents could play chess, bridge, poker, and even bingo with each other without leaving home, housewives could shop via the television screen, and the central computer would even play bookkeeper for individual savings or checking accounts.

* FROM *Education U.S.A.*, January 6, 1966, p. 73. Copyright 1966, by the National School Public Relations Association. Reprinted by permission of the National School Public Relations Association.

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The Changing Role of Evaluation and Research

Evaluation: A New Emphasis

Measuring Our Success

The first step in evaluation of the outcomes of education is to distinguish between education and pedagogy. Achievement of formal academic programs lends itself well to precise measurement. Research in the field is bringing about improvements including measurement of reasoning. Research in the social sciences is still an imprecise process. In the following selection, Herbert C. Rudman reviews aspects of evaluation, including national assessment, within the framework of an educational creed.

MEASURING THE OUTCOMES OF EDUCATION *

Herbert C. Rudman

Several years ago, a colleague of mine introduced me to an audience as the "Barry Goldwater of the Curriculum Set"; he is today, a former friend

* FROM *Measuring the Outcomes of Education* by Herbert C. Rudman, a keynote address delivered at the 51st annual Schoolmen's Conference, University of Minnesota, December 2, 1965, pp. 1-20. Reprinted by permission of the author.

of mine. To one who is a fierce independent in the matter of politics such a description is an odious one; not necessarily for its comparison to Mr. Goldwater, but more for the stereotype of one who must be dragged screaming into the 20th century. If I am an educational conservative, and I must confess to you that I am, it's because of the manifold obfuscations presented to us during the past decade or so. These stupifying, blinding, confusing statements and movements are even more odious to me, than the fact that I am classified as an educational reactionary by some of my facetious friends.

Now even though I have confessed to you that I am a conservative, I still have an obligation to be for something as well as against it. Have you ever tried to develop your own educational creed? I have, and it is not an easy task.

I believe:

- That education is society's ultimate weapon in the eradication of the social ills of prejudice, poverty, crimes of violence and illegal acquisition.
- That the hope for peace on all fronts; domestic, international, political, social and ideological rests solely in education.
- That education is much broader than the school. The school is an institution that exists side by side with other institutions like the church, the jail, the peer, the group, the mass media, the family.
- That each social institution should have clearly defined roles that may overlap with others but is so clearly emphasized that it does not delude itself into thinking that it alone must save society from itself.
- That sufficient research has accumulated to indicate that the school has less effect, dramatically so, on the emotional, physical, and social growth of the child than does the poorest home from which he comes.
- That sufficient experience has shown that only when the school has involved the home and other social agencies has it been able to alter the value systems and the lives of boys and girls.
- That current controversies over organizational schemes (Self-contained classrooms, dual-progress plans, flexible scheduling, graded schools, non-graded schools, school-wide ability grouping); "new" methodologies (Team-teaching, classroom ability grouping, air-borne television); and new content (Modern mathematics, ITA, Joplin Plan, MIT Science Program) all miss the boat. The basic question of how to change behavior lies not in pedagogical tinkering but in educational planning, not in rearranging present school-wide structures, but in coordinating and focusing the work of all social agencies formal and informal, upon the improvement of social problems.
- That anything from the concept of God to the explicit worth of one value system over another is measurable and is subject to research.

- That what holds us back from measuring these "intangibles" is our inability, at the present time, to devise adequate methods, delineate with precision that which we wish to measure or to construct the necessary devices to carry this measurement through to completion.
- That we must, in the meantime, develop operational assumptions and act upon them. But we must not delude ourselves into thinking that we have discovered, through these operational assumptions, truth.
- That the development of operational assumptions does not give us license to tinker with and to destroy existing patterns unless a sufficient amount of logic and theory has been marshalled to warrant change.
- That in my estimation, we have neither the research, the logic nor the theory to destroy or significantly modify much of today's existing pedagogical practices.
- That we do have sufficient experience, logic and theory to modify educational practices.

Now one may ask, "What does all of this have to do with evaluation?" Just this; unless we distinguish between education on the one hand, and schooling, or pedagogy on the other we will find it difficult to intelligently discuss those elements of an educational program that lend themselves to evaluation, and those which do not. Much has been made recently of the distinction between "testing" and "assessing" educational outcomes. I must confess that after poring over every printed statement of those closely connected with the Exploratory Committee on Assessing the Progress of Education (ECAPE) and others who have been most vocal in their opposition to the National Assessment Project that I simply cannot make a clear enough distinction between these two terms. Yet, clearly someone sees a unique difference between the two. Although no printed statement that I have read says so, one might argue that an assessment of educational progress includes the measurement of academic achievement within a school setting and other non-school facets, whereas testing is proscribed to measuring only those outcomes directly traced to the formal school. If this is so, then it becomes more important than ever to recognize the distinction, made in the 14-point creed just enunciated, between education and pedagogy.

The major thesis of this paper will be that there exists a distinction between pedagogy and education, and that this distinction serves as a model to help us determine what can be reasonably measured and what cannot.

EDUCATION AND EVALUATION

On several different occasions spokesmen or advocates of ECAPE have pointed to the necessity for some ~~form~~ ^{national} assessment to help

justify the unprecedented expenditures on public and, to a smaller degree, private education. On July 25, 1965, the *New York Times* carried a story on the White House Conference on Education. In it, John W. Gardner, who at that time acted as chairman of the conference, predicted that proponents of a national assessment program would insist, "that sooner or later the American people will want to know what they are getting for their money." On September 22, 1965, Commissioner Francis Keppel, speaking before an Executive Luncheon at NEA Headquarters had this to say:

We are in an age in which we are going to need a better reporting system than we have had on the quality and the progress of the schools. This is partly documentable, I think, and I do refer to this as a fact because of the language that was written into Title I of the Elementary and Secondary (Education) act. Title I sends money into local school districts whose plans have been approved by the state. You will find Congress inserted language saying that reports had to be submitted by the states to Washington, through the Office of Education and then to the Congress, on what effect these funds were having. That is just one of a good many such requirements of the Congress that amount to saying, "If we are going to put up a million dollars we would like to know what happened to it."

Are these gentlemen correct in their basic assumptions that an assessment of academic achievement can produce answers that will tell the American people and its Congress how effectively the billions of dollars recently allocated have been spent? Let's push on and see. We have said that education is broader than pedagogy; that many social institutions contribute to learning. One could hardly deny that the mass media of communication—radio, television, newspapers and newsmagazines, and movies—all add to one's funded store of verbalized knowledge. One could hardly deny that an individual's friends and associates, his church and social environment all contribute to his funded store of knowledge; the out-of-school reading and sheer living that one does—youth organizations such as the Scouting movements, interests engendered by home, travel and hobbies—all play a part in expanding, and in some cases entrapping the intellect.

How then, I ask you, can an assessment of academic achievement as defined in the broadest sense of Mr. Tyler's recent public statements, produce an answer to the question of "Was our money well spent?" There is no way known to measurement people today of differentiating among the sources of knowledge and saying money spent here, produced so much learning, and money spent there gave us these results. One's funded store of verbalized knowledge comes from so many different sources and is so intricately intermeshed that we can never (and I use this term advisedly and responsibly) separate the warp from the woof of this piece of cloth which we call academic achievement.

Now while this may appear to be an apparent contradiction to an earlier statement which said that anything from God to value systems could be measured I assure you that it is not. I wouldn't argue that the elements which comprise the sources of academic achievement cannot be clearly delineated and subjected to measurement—they can; but when we analyze these antecedents of specific learning separately, they still are not the same as if they were in combination with one another. In other words, an analysis of the parts would still not lead one to an understanding of the *Gestalt*, or the resulting compound of learning. Picture eating a steak at Charlie's; now describe it in terms of chewing it, swallowing it, digesting it . . . and let's stop at that point. After you have clinically described the essential elements of the process of eating a steak, what have you got? I can assure you that you don't have the essence of Charlie's steak. So it is with attempting to measure the various sources of one's funded store of knowledge and ascribing to each source an effectiveness score. How then, I ask, can one truly tell the American people and their Congress the degree to which their money has been wisely spent?

Another question one might ask in connection with the evaluation of education as it has been defined here is, "What elements constitute education, and what evidence is there to indicate how satisfactorily we have been able to assess them?" If education is learning derived from many social institutions including the school, and for purposes of this discussion it is, then what facets have been measured in the past, and with what degree of accuracy? What research data have we accumulated on emerging techniques of evaluation that differ in significant ways from those used in the past?

Research Studies—Achievement

The first and obvious facet of education, is the formal academic achievement in such areas as Reading, Language Arts, Mathematics, Social Studies, Citizenship, Fine Arts and Vocational Education. Now this is the area which lends itself to the most precise measurement and is closely related to what constitutes the major function of the school as a social institution. Probably the most dramatic change in standardized achievement tests over the past decade has been the trend towards items which demand critical reasoning on the part of the student. This has taken many forms; in the Language Arts, students are asked to correct poorly written and poorly spelled passages; in Science, students respond to diagrams which call forth sound reasoning and the recognition of scientific principles as well as sheer recall of specific facts; in the Social Studies students may be given a political poster and asked to make judgments about the candidates qualifications or about the stand he would be expected to take on certain legislation; in Mathematics, students must dwell on the meaning of mathematical con-

cepts as well as exhibiting the more traditional skills of computation and reasoning. In almost all content fields, a new approach to objective testing is evidenced.

Researchers continue to probe and explore the assets and limitations of standardized achievement tests. In a recent issue of the *Review of Educational Research* the topic of Educational and Psychological Testing was reviewed. In a chapter on educational achievement, Harold F. Bligh, reported studies dealing with test development, reference groups and norms, test interpretation, the comparability of tests and test scores, and the predictive abilities of standardized achievement tests. He concluded that during the period, 1961-64, marked improvement in the design and quality of research studies pertaining to tests of educational achievement had been made.

Henry Chauncey, in a paper entitled "Progress in Testing" reports on an eight-year longitudinal study presently conducted by the Educational Testing Service in 17 public school systems and in six private schools. The same students enrolled in the 5th grade at the beginning of the study are being followed through to the completion of the 12th grade. "The purpose of the study," as Chauncey reports, ". . . is to determine how intellectual growth varies with, or is affected by, characteristics of the school and the community, and the characteristics and background experiences of the students. The study will also provide information on how well 12th graders' performance on college entrance tests can be predicted from earlier performance on ability and achievement tests. A third kind of information expected from the study will pertain to the academic record, characteristics and background experiences of students who drop out of school."

In a monumental study, Project Talent, John C. Flanagan and his associates study not only the academic achievement of the American high school student, but many other facets as well. In fact this particular project comes closer to analyzing education in its broadest dimension of any contemporary research I know. Although Project Talent is simply too complex to report with any degree of specificity here, we can summarize briefly the implications of the results in tests of Arithmetic Reasoning, Capitalization, English Usage, Spelling, and Reading Comprehension of Novels and Magazines.

1. The average high-school student apparently isn't as good at solving simple reasoning problems as he is at memorizing simple rules (like the rules of capitalization) and applying them.
2. Differences in amount of information are sometimes, but not always, indicative of differences in intrinsic capacity to learn a subject.
3. Amount of formal training in an area or informal exposure to it, even if that training or exposure has not been sought by the individual, probably plays an important role in determining the amount of information he acquires in the area.

4. Most sex differences that have been found in patterns of information, reflect differences in interests.
5. The fact that differences in ability within a grade are so great in comparison with differences between grades is a strong argument in favor of individualizing instruction.

As we can see, the assessment of academic achievement as one dimension of education is precise, relatively easy to acquire, and is improving steadily as advancements are made in measurement theory.

Research Studies—Sociological Aspects

Research in the social sciences is at best an imprecise process plagued by an almost infinite number of variables. As Jahoda, Duetsch and Cook put it in *Research Methods in Social Relations*:

The quality of research depends not only upon the adequacy of the research design but also upon the fruitfulness of the data-collection techniques which are employed. The purpose of the various data-collection techniques is simply to produce precise and reliable evidence which is relevant to the research questions being asked. Fulfillment of this purpose, however, is rarely simple . . . (in sociological research).

Gottlieb, in a review of pertinent sociological research studies in a recent issue of the *Review of Educational Research*, reported that work completed between the years 1961–63 dealt with social class, the economically deprived, drop-outs at the high school, college and graduate school levels, characteristics of college students and student subcultures. One of the interesting trends in sociological findings seems to be that socio-economic status appears to be playing less of a prominent role in predicting student expectations, behavior and aspirations. There is some reason to believe that self-concept and self-assessment appear to play a greater role than does the social environment from which the student comes.

This finding has recently been corroborated in three studies with which I have had some contact. In a study completed by your own Dr. Mueller, and in a study by Dr. Springer of the University of Illinois, socio-economic status played less of a significant relationship on the perceptions of quality by teachers and administrators than was expected from previous research studies. Dr. Summerer of Michigan State University who studied the success rates among students in a community college, found that other factors played a more significant role than did occupational status of the father.

Throughout all of the studies conducted in the field of sociology, however, one finds a fairly high degree of contradiction, and lack of precision which marks this field of investigation as one fraught with booby-traps set up by the vast number of variables with which a social scientist must contend.

Research—Personality Factors

The rubric, personality factors, is an elusive one which defies easy elaboration or definition. To some it would include citizenship behavior, or fundamental character; to others it connotes such psychologically oriented concepts as response set and social desirability, self-concepts, body image and anxiety. To the consumer and producer of research in this field, the threading of one's way through a semantic jungle marks this area of investigation as still in an infancy stage. This is not to say, however, that no work has been done in this field. One could not leave this campus unscathed if one were to ignore the pioneering work of the MMPI, the Minnesota Multi-phasic Personality Inventory.

In a review of studies in the measurement of personality, Gaier and White recently wrote:

. . . from the statistically sophisticated studies concerned with personality to the more impressionistic surveys encountered in symposia papers, the studies during the last three years (1961-64) *in toto* reflected a picture of chaos, from which, however, there now seems to be more promise amid an increasing sophistication of more widely tested, perhaps even more generally acceptable, theories.

Cattell, one of the pioneers in personality research has developed a single theoretical model in which he has posited 28 propositions defining a series of personality, role, and group concepts in group behavior which he believes to be mutually consistent. He has, in the words of Gaier and White, dominated this area "by his singlemindedness in demonstrating meaningful personality parameters via factor analytic techniques." (You see, once you begin to get into this field of research you fall prey to semantic monsters that tend to devour your own simple vocabulary.)

One of the newest techniques used by some researchers in this area has been computer simulation of personality. Vast amounts of data are handled in a multivariate manner. Simulation studies on cognitive behavior by Abelson and on models of perception and language by Uhr seem to hold some promise for the development of theories of personality through the use of computers.

I wish any researcher venturing into this area well, and God-speed; he'll need it.

Research—Interests and Personal Qualities

In many respects interests and personal qualities are really facets of one's personality. If I may quote Chauncey once more:

The goal in appraising personal qualities is to try to get a picture of an individual's typical behavior—not what he can do, but what he does. . . .

One approach to measuring interests and personal qualities is through the use of questionnaires which elicit from an individual descriptions of his own behavior. If one uses a multiple-choice type of instrument the subjects' responses are controlled to a high degree by those options available to him. If the subject is given an open-ended questionnaire in which he has relatively free rein to describe his attitudes, interests, or behavior his answers may be incomplete or ambiguous. But these responses, however derived, are highly vulnerable to faking and in this lies the greatest drawback to interest studies of this type. Oral interviews or written questionnaires; both suffer from the same shortcoming.

In summary then, what I have tried to do in too short a space is to examine some dimensions of behavior that do not necessarily lie solely within the purview of the school alone and to analyze the problems of collecting meaningful data within these dimensions. Assessment of academic achievement as one facet of education is relatively precise and even though it, too, is far from perfect is nevertheless the most accurate measure one has concerning the status of knowledge of an individual. Sociological factors are plagued by many variables, personality factors are most difficult to measure meaningfully, and interests and personal qualities can be described but within certain limitations of integrity of response. Can education in its broader sense be evaluated? Yes—but.

Perhaps some would argue that I place too much faith in standardized achievement tests, but the research with which I am familiar leads me to believe that this dimension of education is the most reliable and valid facet, and the one which lends itself most easily and readily to assessment.

PEDAGOGY AND EVALUATION

In the past few months we have been witnesses to what may be one of the longest, and unfortunately most vitriolic educational debates of the past few decades. There are some among our ranks who would charge that a national assessment program will inevitably lead to a national curriculum. There are some who would argue that "assessment" is more than "testing" and hence would not seriously affect the school program; particularly since no one child would ever take an entire examination or be subjected to a complete "assessment." I have heard, recently, a chief state school officer whose intellect and personal integrity I admire, charge that ECAPE was an eastern seaboard Educational Establishment plot to institute a national curriculum which would be federally controlled. I have read, as I am sure that you have, statements by at least one prominent curriculum professor which alluded to ECAPE as a "camel's nose" poking under an Arabian

tent soon to be followed by the rest of the camel in the form of a national curriculum. Are these men correct? I would have to argue with their basic assumption that we do not now have a national curriculum, and must therefore guard against the possibility of getting one.

I would argue that the first two McGuffey's readers published in 1836 opened a Pandora's box to a national curriculum as they, the first of the graded textbooks made their appearance on the American scene. The lid was literally torn off of its hinges in the 40-year period following the Civil War with the advent of the wide acceptance of the graded school system.

As one history of education textbook describes this period:

Courses of study were developed which rigidly prescribed the subject matter to be mastered or the skills to be acquired. Textbooks were prepared, subject by subject, for each of the several grades and it was the duty of the teacher to see that the pupils "covered" the prescribed pages within the allotted time.

Now, honestly, how has the situation changed today? Mr. Tyler and others connected with the ECAPE project have consistently maintained that their approach to the development of assessment instruments has been and will be to ask scholars and "informed" lay citizens what they feel should be the educational objectives of the school and follow this up by the production of the necessary evaluative instruments. This, they say, is a more realistic approach to the assessment of education. It would appear to me that they are as equally at fault as are their opponents; the reality of American public education today is the graded textbook which has given the United States a national curriculum from as far back as the period, 1865 to 1905. One doesn't have to be an educational reactionary to recognize reality nor does one have to hate children because he refuses to accept the "what-ought-to-be" of the professional curriculum theorist as the reality-even-if-we-haven't-completely-accepted-it; it's-a-goal-that-we-must-shoot-for pipedream. Those of us who must continually be faced with the problem of improving, modifying, teaching, testing or analyzing curriculum, need more than a normative pipedream with which to work.

The argument that a national assessment program will bring on a national curriculum is, I believe, wrong. In truth, it has been the other way around. It was a national curriculum which brought about a number of national testing programs; the first, and I believe, the most widely adopted program was the *Stanford Achievement Test* authored by Truman L. Kelley, Lewis Terman and Giles Ruch in 1922. By my reckoning a good 17 years after the establishment of a national curriculum. Since that time other excellent testing programs were initiated and developed on a national basis; these were not all equal in quality, I grant you but I leave it to you and to Mr. Buross' reviewers to determine who the culprits were. But the

inescapable fact is that a national curriculum determined a national testing program over 43 years ago. Now what is all of the fuss about?

You and I, each of us in this auditorium today are products of a national curriculum—and I say thank goodness for that. With the mobility that we as American citizens possess, a national curriculum is a national necessity; for our teachers, a national testing program is an important tool. Now I am as aware as some of our sharper semanticists in this audience are that (1) I shifted from a national “assessment” terminology to a national “testing” phrase, and (2) that a national testing program is not quite the same as a nationally developed testing program. Let me explain; there are others who will follow me who will prefer to use the term, “assessment” rather than “testing.” If their distinction is the same as the one that I identified earlier in this paper, then I must use “testing” in its newer and more limited context, *viz.*, the school milieu. Although one might argue that a national assessment program is a cohesive program given at one time to selected populations throughout the country, I can just as easily argue that data obtained through a widely based standardization of an academic achievement test yields much of the same data. Nevertheless, for the sake of minimizing conflict and because I am a non-controversial man by nature, I do publicly recognize that some might wish to make this distinction between a national testing program and a nationally developed testing program.

Earlier in this paper, I defined pedagogy as most closely connected with school-based learning. I also said we need to recognize that many social institutions (including the school) were educative in nature, but each had some central purpose in our culture. I said that even though some functions among these social institutions overlapped, each needed to recognize its central role and realize that it alone could not solve all of the problems facing Mankind. So it is with the school. It is my belief, and historically it is a fact, that the central function of the school is the acquisition and dissemination of verbalized knowledge. This being the case, the two main areas requiring periodic evaluation and measurement are academic achievement and scholastic aptitude.

Let us first turn to the measurement of scholastic aptitude. Knowledgeable practitioners in education have joined psychometricians in abandoning the use of the term “intelligence testing.” We have come to realize how imprecise this term really is. Stoddard's *The Meaning of Intelligence* more than 20 years ago, established the lack of constancy of the IQ, the score so often confused with innate intelligence. Since that time, and the more researchers have examined the phenomenon called IQ, the more we have realized that intelligence testing through our written instruments is fundamentally a misnomer. As Chauncey has so well put it, “. . . what we are testing is developed ability or aptitude which results from the development

tent soon to be followed by the rest of the camel in the form of a national curriculum. Are these men correct? I would have to argue with their basic assumption that we do not now have a national curriculum, and must therefore guard against the possibility of getting one.

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The argument that a national assessment program will bring on a national curriculum is, I believe, wrong. In truth, it has been the other way around. It was a national curriculum which brought about a number of national testing programs; the first, and I believe, the most widely adopted program was the *Stanford Achievement Test* authored by Truman L. Kelley, Lewis Terman and Giles Ruch in 1922. By my reckoning a good 17 years after the establishment of a national curriculum. Since that time other excellent testing programs were initiated and developed on a national basis; these were not all equal in quality, I grant you but I leave it to you and to Mr. Buross' reviewers to determine who the culprits were. But the

inescapable fact is that a national curriculum determined a national testing program over 43 years ago. Now what is all of the fuss about?

You and I, each of us in this auditorium today are products of a national curriculum—and I say thank goodness for that. With the mobility that we as American citizens possess, a national curriculum is a national necessity; for our teachers, a national testing program is an important tool. Now I am as aware as some of our sharper semanticists in this audience are that (1) I shifted from a national "assessment" terminology to a national "testing" phrase, and (2) that a national testing program is not quite the same as a nationally developed testing program. Let me explain; there are others who will follow me who will prefer to use the term, "assessment" rather than "testing." If their distinction is the same as the one that I identified earlier in this paper, then I must use "testing" in its newer and more limited context, viz., the school milieu. Although one might argue that a national assessment program is a cohesive program given at one time to selected populations throughout the country, I can just as easily argue that data obtained through a widely based standardization of an academic achievement test yields much of the same data. Nevertheless, for the sake of minimizing conflict and because I am a non-controversial man by nature, I do publicly recognize that some might wish to make this distinction between a national testing program and a nationally developed testing program.

Earlier in this paper, I defined pedagogy as most closely connected with school-based learning. I also said we need to recognize that many social institutions (including the school) were educative in nature, but each had some central purpose in our culture. I said that even though some functions among these social institutions overlapped, each needed to recognize its control role and realize that it alone could not solve all of the problems facing Mankind. So it is with the school. It is my belief, and historically it is a fact, that the central function of the school is the acquisition and dissemination of verbalized knowledge. This being the case, the two main areas requiring periodic evaluation and measurement are academic achievement and scholastic aptitude.

Let us first turn to the measurement of scholastic aptitude. Knowledgeable practitioners in education have joined psychometricians in abandoning the use of the term "intelligence testing." We have come to realize how imprecise this term really is. Stoddard's *The Meaning of Intelligence* more than 20 years ago, established the lack of constancy of the IQ, the score so often confused with innate intelligence. Since that time, and the more researchers have examined the phenomenon called IQ, the more we have realized that intelligence testing through our written instruments is fundamentally a misnomer. As Chauncey has so well put it, ". . . what we are testing is developed ability or aptitude which results from the development

of whatever innate ability an individual has." Today educationists refer to the old "intelligence" test as a test of scholastic aptitude. We recognize that tests of scholastic aptitude measure more than one ability and that further these results will vary from time to time; and this is as it should be for the test not only measures innate ability but also that which one has learned.

Although I have discussed achievement tests in the preceding section dealing with education and evaluation let me turn to another dimension . . . how standardized achievement tests are constructed. Both the advocates and the opponents of a national assessment project have, for some reason, felt it necessary to take a swipe at standardized achievement tests. The pity of it all, is that in their anxiety to make a point they have been guilty of shoddy scholarship and have allowed their forensic abilities to overcome what I am sure they all possess—a basic understanding of the principles of measurement. When an author sets out to construct a standardized achievement test he must first be aware of the educational objectives of each grade level to be tested. In the case of one standardized achievement test that I know well, the authors reviewed the contents of every reputable standard textbook in every content field in each of the subjects to be tested. In addition the locally produced curriculum guides of over 200 school systems were analyzed for subject and grade placement. From this painstaking analysis of educational objectives grew a test item outline subject by subject. From the development of the educational specifications of the test (the proper grade placement of subject matter and skills) and the test outline, preliminary manuscripts were written. These manuscripts were often pre-tested on upwards of 1000 or more children and subjected to item analysis, writing style and the like, before they were sent to editors for editorial work. Once a polished manuscript was developed, an item analysis was made by administering various forms of the batteries constructed to over 19,000 children in 19 school systems located from coast to coast and border to border of the United States. More than 15,000 items were individually analyzed for growth from grade to grade and for item reliability. Batteries and their equivalent forms were then re-constructed, and a standardization form of the test was administered to over 850,000 children in 264 school systems drawn from each of the 50 states. The standardization data produced a data bank of student performance on these tests by population centers, by public, private and church-related schools, and the like. This data is now available in the form of three different sets of norms; stanines, percentiles, and grade equivalents.

Time, mercifully, does not permit me to identify the gross errors and misstatements of fact recently aired by those praising and those sniping at a national assessment project, but believe me they are manifold. I hope that this brief description of how one good standardized achievement test was constructed can allay some of the misconceptions engendered in recent months.

SUMMARY

I have attempted within this paper to differentiate between education, broadly conceived, and schooling. I have maintained throughout that such a distinction is essential if we are going to engage in any dialogue about the merits or shortcomings of a national assessment program. As we have seen, some have maintained that a national assessment program is essential if we are to judge whether national expenditures for schools are worth the financial sacrifices made by the American taxpayer. I have maintained that this is not realistic unless we limit ourselves to a status study of what the American citizen, young or old, knows. We simply cannot meaningfully justify educational expenditures by pinning the medal or the blame on the American school; we must instead pour money into all aspects of our culture if we are to get an accurate measure of the relationship between educational expenditure and educational achievement. The Russian word "prosveschennie" means enlightenment. In fact what we have called ministries of education in the Soviet Union are actually ministries of enlightenment. Soviet expenditures are not limited to schools alone. Their budgets also include funds for mass media, theatres, out-of-school educational and social organizations and the like. If Congress wishes to develop an assessment program then it may well have to turn to some form of an "enlightenment" expenditure rather than the more limited concept of educational expenditures. If it chooses to limit itself to the school milieu then one cannot realistically measure educational achievement, however expressed, and then heap upon the schools praise or damnation.

I have reviewed those areas outside of the school setting and have attempted to analyze what research tells us are those areas capable of measurement at the present time. An analysis of the writings of those connected with the national assessment project leads me to the identification of 7 areas to be studied; educational or academic achievement, the effect of size of population center, socio-economic-status, citizenship habits, interests, skills, and other personal qualities. I have therefore attempted to determine what recent research (1961-64) has produced that would lead us to estimate what our chances are for valid measurement of these areas.

I have taken a considerable portion of your time this morning. I can only hope that I have added to your funded store of knowledge as much as the preparation of this paper has added to mine.

National Assessment Project

In the past few years there have been many demands for some type of national assessment of education. The proposition has been heatedly debated

pro and con. The Carnegie Corporation has sponsored such a program. Ralph W. Tyler is chairman of the study. In the following selection, he reviews the background and status of the project.

ASSESSING THE PROGRESS OF EDUCATION *

Ralph W. Tyler

Education, today, is of great concern to all Americans. Without education our young people cannot get jobs, are unable to participate intelligently and responsibly in civic and social life, and fail to achieve individual self-realization. Education is increasingly recognized as the servant of all our purposes.

NEED FOR DEPENDABLE INFORMATION ON PROGRESS

Because of its primary importance, our people are seeking information to guide their thinking and action in support of education. They are asking many questions: Are we making progress in raising educational levels? Are there areas or fields in which progress is lagging, where more support and effort should be focused? Is progress more pronounced in certain sectors of the population such as urban, rural, central city, suburban, lower socioeconomic levels, upper socioeconomic levels? As schools increase their efforts to solve particular problems, questions will be raised about the progress thus achieved. As time goes on, school people and laymen alike will be seeking to understand more fully the relation between the various "inputs" into our schools and the progress of education.

The need for information of this sort by teachers, administrators, school boards, legislators, community leaders, and the public generally is a legitimate one. The great educational tasks we now face require many more resources than have thus far been available, and these resources must be wisely used to produce the maximum effect in extending educational opportunity and raising the level of education. To make these decisions, dependable information about the progress of education is essential; otherwise we scatter our efforts too widely and fail to achieve our goals. Yet we do not now have the necessary comprehensive and dependable data. We have reports on numbers of schools, buildings, teachers and pupils, and

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about the moneys expended. But we do not have sound and adequate information on educational results. Because dependable data are not available, personal views, distorted reports, and journalistic impressions are the sources of public opinion and the schools are frequently attacked and frequently defended without having necessary evidence to support either claim. This situation will be corrected only by a careful, consistent effort to obtain valid data to provide sound evidence about the progress of American education.

The need for data on progress has been recognized in other spheres of American life. During the depression, the lack of dependable information about the progress of the economy was a serious handicap in focusing efforts and in assessing them. Out of this need grew an index of production, the Gross National Product, which has been of great value in guiding economic development. Correspondingly, the Consumer Price Index was developed as a useful measure of the changes in cost of living and inflation. Mortality and morbidity indices are important bases for indicating needed public health measures. Facing the need for massive efforts to extend and improve education, the demand for valid information to support the requests and to guide the allocation of resources must be met.

NEW TOOLS REQUIRED

There is some misunderstanding of the nature of an assessment of educational progress because it is confused with the typical achievement testing programs used in many schools. Current testing programs seek to measure the relative achievements of individual pupils, while the assessment of educational progress seeks to describe what has been learned by various groups of children, youth, and adults representing different geographic areas and different sectors of the population. A pupil takes an achievement test and his score is reported. In sampling areas and population groups, no one person responds to more than a few of the assessment exercises. In achievement testing, summaries of scores are commonly made for each classroom and each school, so that the pupil scores from one classroom and school may be compared with those from another. In assessing areas and population groups, no one classroom or school includes more than a part of the assessment sample and no summaries of achievement by classroom or school can be made. The unit of reporting is the area or population group.

Achievement testing is often criticized because of its influence on pupils and teachers who wish to show up well on the tests. In assessing the progress of education, no individual pupil, classroom, or school shows up at all. Instead, a report would indicate that 90 per cent (nearly all) thirteen-year-old children can comprehend reading paragraphs like these, can

solve arithmetic problems like these, can sing songs like these, have citizenship habits like these, and so on. Examples are given of the achievements rather than relative scores. Similarly, the achievements characteristic of 50 per cent of the thirteen-year-old children would be explained and those characteristic of only about 10 per cent of the age group. Reports of this sort are planned for four age groups—nine, thirteen, seventeen, and adult. Samples of children, youth, and adults carefully chosen to represent geographic areas; socioeconomic levels; and rural, urban, central city, and suburban populations would provide data without anyone or any classroom taking a full assessment battery or getting a score or report from it. Because the assessment exercises can be given individually and by interview, it is possible to sample more than the content of the traditional paper-and-pencil tests. Performance, interests, skills, habits, and the like can be included. Furthermore, the assessment situation eliminates pressures for rapid response, since reasonable time limits can be provided. And the areas of appraisal will include much more than the three R's. Hence the assessment should remind the public of the range of educational objectives being sought by modern schools rather than limiting its attention to a small part of the educational program. Reports made every few years would provide information about educational progress.

The assessment exercises will differ from current achievement tests in two other important respects. An achievement test seeks to measure individual differences among pupils taking the test. Hence the items of the test are concentrated on those which differentiate among the children. Exercises which all or nearly all can do, as well as those which only a very few can do, are eliminated, because these do not give much discrimination. But for the purposes of assessing the progress of education we need to know what all or almost all of the children are learning and what the most advanced are learning, as well as what is being learned by the middle or "average" children. To get exercises of this sort will be a new venture for test-constructors.

The other important difference is the requirement that each assessment exercise be intelligible to the thoughtful lay citizen and something which he recognizes as desirable for children to learn. Current achievement tests report in numerical scores, and items are often included which are correlated with grades or other criteria but which are not apparently sensible or significant for children to learn.

It is clear that assessing the progress of education is not the same as mounting a nationwide testing program. The assessment will report on the educational attainments of samples of children, youth, and adults. It will not provide scores of pupils nor of classrooms but will present examples of what is learned by four different age groups, illustrating what all or almost all have learned, what the most advanced have learned, and what is learned by the "average." This requires tools different in several respects from current achievement tests.

BACKGROUND OF THE ASSESSMENT PROJECT

In the summer of 1963, several educational leaders asked me to prepare a memorandum on the possibility of assessing the progress of education. This memorandum was the subject of discussion in December, 1963, by a conference of educational measurement people who concluded that the development of such an assessment was feasible at this time. In January, 1964, a conference of national educational leaders reviewed the memorandum and discussed the educational pros and cons of developing an assessment procedure. The conclusion of the conference was that such an appraisal involved problems of potential misuse but that the need for carefully developed instruments and comprehensive information was so great that a project of this sort should be launched.

A private foundation, the Carnegie Corporation, granted the funds for an exploratory project and appointed an Exploratory Committee on Assessing the Progress of Education. Its membership is given at the end of this report. The committee's assignment is to confer at greater length with teachers, administrators, school board members, and others concerned with education to get advice on the way in which such a project may be constructively helpful to the schools and avoid possible injuries. The committee is also charged with the development and tryout of instruments and procedures for assessing the progress of education.

During the academic year 1964-65, seven conferences were held with teachers, curriculum specialists, administrators, and school board members. The participants in all of these meetings recognized the need for comprehensive information on the progress of education and also pointed out the dangers of a poorly developed program and the potential misuse of information obtained from it. They recommended that the assessment instruments be developed in cooperation with teachers and be tried out in the schools. As the schools find the assessment meaningful and helpful, it will then be appropriate to recommend its use on a nationwide scale. The conferees recognized that the development of instruments and procedures would take time. They could not all be worked out at once. But the conferees recommended that even in the initial stages the assessment include a range of educational objectives and not be restricted to the three R's. As time goes on the project should become more and more comprehensive. Over the years, as school objectives change, the assessment procedures should change just as the economic index, Gross National Product, has included new items as our patterns of production change.

The conferees discussed the auspices under which an assessment could best be conducted. The consensus of the conferees was that the assessment should be under the direction of a private commission and not be a project of federal or state governments. It was also recommended that the initial support for the work be obtained from private sources.

PRESENT STATUS OF THE PROJECT

The Exploratory Committee adopted as policy the recommendations of the educational groups and drew up plans for developing instruments and procedures in harmony with them. In February, 1965, a seminar involving the major test construction agencies and survey research centers was held to work out plans for the development of instruments which would fulfill these conditions. This resulted in the formulation of the following specifications:

1. The specifications of the educational achievement to be assessed are to be developed with the assistance of a) specialists in the subject or field involved and b) teachers.

2. Before final approval, the specifications are to be reviewed by panels appointed by the Exploratory Committee.

3. The assessment procedures and the items, questions, or other exercises developed are to be tried out in schools and communities selected in consultation with the Exploratory Committee.

4. The validity of each item, question, or other exercise used in the assessment is to be judged by two criteria: a) it is an example of the behavior described in the specifications, b) intelligent laymen can recognize this behavior as worth learning.

5. Four groups of items, questions, or other exercises are to be prepared for the four age levels: a) children approximately 9 years old, b) children approximately 13 years old, c) youth approximately 17 years old, and d) adults.

6. Each group of items, questions, or other exercises to be used at one age level is to include approximately one-third which represent the achievements characteristic of most of those at that age level (approximately 90 per cent of them), approximately one-third which represent the achievements characteristic of about half of those at that age level, and approximately one-third which represent the achievements characteristic of the most educationally advanced (approximately the top 10 per cent of that age level).

7. Efforts will be made to devise categories for the items, questions, or other exercises which can be understood by intelligent laymen and which subsume items which are relatively homogeneous in terms of the percentage of the age group exhibiting this behavior.

8. The total number of items, questions, or other exercises developed for each instrument is to be adequate for a reliable assessment. The level of reliability to be met is a matter to be worked out with the Exploratory Committee after the initial tryouts have provided some preliminary data on the variability and time requirement for the exercises.

The committee has made contracts with American Institute of Research, Educational Testing Service, Psychological Corporation, and Science Research Associates to construct the initial instruments in reading, language

arts, mathematics, social studies, citizenship, fine arts, and vocational education. At least two contractors are working in most areas in order to explore more than one approach. Later, survey research centers will be employed to develop assessment interviews with adults, and after the initial tasks are well along contracts for constructing instruments for other areas will be let.

The development of instruments is taking more time than we had anticipated, but we now understand the reason. An assessment of this sort has never before been attempted in any comprehensive way. Experts in constructing achievement tests have to learn new techniques and gain new perspectives because of the differences between individual tests and population assessments. This means that frequent reviews must be made of the work in progress and the problems identified which must be solved in order to meet the specifications. It now appears that the tryouts of most of the new instruments will not be made before the second semester of 1965-66. We are sorry for the slower progress, but we recognize that the validity and constructive usefulness of the assessment must not be sacrificed for speed. We need comprehensive, dependable data about the progress of education in America. I am optimistic that we are on the road to getting increasingly helpful information.

Information on National Assessment

Education U.S.A. reviews the main features of the national assessment program to be tested experimentally for the first time in 1967. The program, sponsored by Carnegie Corporation, may be the forerunner of yearly national assessment. The experimental study will provide sampling by age, geographic regions, levels of knowledge, and numerous subject areas.

NATIONAL ASSESSMENT OF EDUCATION NEXT FALL *

The baselines for the first major assessment of American education are almost ready for running. Lloyd N. Morrisett, vice-president of the Carnegie Corp., reported to the Educational Press Assn. in Washington, D.C., that "measuring instruments" will be available for the first assessment by the fall of 1967.

* FROM *Education U.S.A.*, October 27, 1966, p. 49. Copyright 1966 by the National School Public Relations Association. Reprinted by permission of the National School Public Relations Association.

The rapid development of an idea to measure the quality of American education, rather than just the quantity, began with a series of exploratory conferences in 1963, sponsored by the Carnegie Corp. After deciding that it was "feasible and educationally desirable," a committee, headed by Ralph W. Tyler, has studied the plan further, issued contracts for the development of measuring instruments ("we don't call them tests," Morrisett said), and will soon recommend an agency that could conduct the assessment. He outlined some details of the assessment procedure:

- *Samplings will be taken* of 9, 13, 17, and adult (about 30 years old) age levels. It is hoped that the school-age samples will be conducted through the schools; the adults will be reached by population sampling techniques.
- *Sampling will be at three levels*—what 90% of the population should know, what the majority of the population should be expected to know, and what a small percentage (10%) should know.
- *The sampling also will be taken by four regions* (Northeast, Southeast, Midwest, and Far West); by four levels of urbanization (city, rural, etc.) which also will take into account the socioeconomic level; and by both sexes.
- *The first measurements will be in nine areas*—reading, writing, literature, vocational education, fine arts, social studies, math, citizenship, science.
- *No participant will be expected to take more than a small part of the battery*, a maximum of 40 minutes. The full assessment would require about 10 hours.
- *The agencies under consideration are the federal government and the assessment committee*, both of which Morrisett termed "unlikely," and a coalition of states or cities or the recently formed Compact for Education.

Morrisett emphasized that the assessment would be voluntary, and he expects good cooperation. With a few exceptions "educators who have had the assessment fully explained to them have approved of it," he said. He said that comparisons of results will be beneficial, and that there is some possibility of conformity to a national standard, but it would be to "broaden educational prospects beyond what are now held." Federal funds, which up to now have only provided conference funds, will be necessary in the future, Morrisett explained, because each assessment (hopefully taking place every four years) will require \$2 to \$3 million.

Research: A New Emphasis

Educational Research and the Hawthorne Effect

Every innovator has had some research-oriented person ask him, "Yes, but what about the Hawthorne effect?" Certainly administrators engaged in innovation must know about the Hawthorne studies and why they are important to him and his innovative program. What the Hawthorne effect is and its implication to educational research and innovation are presented by Desmond L. Cook.

THE HAWTHORNE EFFECT IN EDUCATIONAL RESEARCH *

Desmond L. Cook

What is the *Hawthorne effect*? When, where, and how did the concept originate? If one seeks answers to these questions in such references as Good's *Dictionary of Education*,¹ the dictionary of psychological terms by English,² most of the books on educational research methodology, or the several issues of the *Encyclopedia of Educational Research*, the listings and indexes will not help him. This failure to index the Hawthorne effect concept is rather significant, since the phenomenon is so frequently referred to in explaining either the apparent conclusive or nonconclusive results of educational researches.

Even though not indexed, the term does appear quite frequently in the literature on research methodology, and its general nature is commonly recognized by researchers. The implications for educational research have not, however, been fully explored. The intent of this paper is to answer three questions: 1) What is the Hawthorne effect? 2) What are its implications for educational research? 3) What methods have been advanced to control the effect in research procedures?

* FROM *Phi Delta Kappan*, December, 1962, pp. 116-22. Reprinted by permission of *Phi Delta Kappan*.

¹ C. V. Good, *Dictionary of Education*. New York: McGraw-Hill Book Company, 1959.

² H. B. English, *A Comprehensive Dictionary of Psychological and Psychoanalytical Terms*. New York: Longmans, Green, 1958.

WHAT IS THE HAWTHORNE EFFECT?

So far as I know, the term as it is now generally used first appears in written form in the book *Research Methods in the Behavioral Sciences* by Festinger and Katz.³ In a discussion of experiments conducted in field settings, French contrasts laboratory and field experimentation settings and points up the problem of generalizing from each type.⁴ He indicates that the difference between the two types is not in the nature of the research that takes place but in whether the researcher is working with real or artificial social phenomena. French believes that the laboratory setting is artificial if the subjects behave differently than if they were not in the laboratory. To him, a field experiment is usually not subject to artificiality. Consequently, the problem of generalizing to other real life situations is thus avoided. He goes on, however, to point out an important exception:

That this is not always the case . . . is well illustrated in the famous Hawthorne experiments. From a methodological point of view, the most interesting finding is what we might call the "Hawthorne Effect."

Let us look at the original Hawthorne experiments for this "interesting finding." In 1924 the Massachusetts Institute of Technology initiated a series of tests under the sponsorship of the National Research Council and the Illuminating Engineering Society to ascertain the relationship between illumination and production in various factory situations. The report by C. E. Snow⁵ contains the results of the several investigations. One of the participating firms was the Hawthorne plant of the Western Electric Company. The tests conducted there are of immediate concern because it is from them that the term *Hawthorne effect* was eventually derived.

Three separate series of illumination-production tests were conducted at the Hawthorne plant. Space does not permit a detailed report of each series, but because the sequence of the series is important it will be described. In the first series, the investigators manipulated the lighting in three different parts of the plant. A general observation was made that production levels under the different amounts of illumination were always *higher* at the end than at the start and did not fall off even with a decrease in illumination. As a result of this first series, certain necessary modifications in procedure became evident.

³ L. Festinger and D. Katz, editors, *Research Methods in the Behavioral Sciences*. New York: Dryden Press, 1953.

⁴ John R. P. French, Jr., "Experiments in Field Settings," in L. Festinger and D. Katz, editors, *Research Methods in the Behavioral Sciences*. New York: Dryden Press, 1953, Ch. 3, pp. 98-135.

⁵ C. E. Snow, "Research on Industrial Illumination," *Tech Engineering News*, 8:257-282.

The results of this first winter's test, covering the three departments described, brought out very forcibly the necessity of controlling or eliminating the various additional factors which affected production output in either the same or opposing direction to that which we could ascribe to illumination.⁶

The second and third series of tests have high relevance to the topic, not only because of their subsequent results but also because of the methodological procedures employed. One must first be cognizant of the era in which these studies were conducted. In the early Twenties, industrial psychologists were working under the conviction that the traditional approach to scientific investigation of manipulating a single variable was a means of fruitful investigation. Under this approach, illumination change was to be the independent variable and production the dependent variable. To overcome the limitations of the first series, the investigators set up the two subsequent experimental series using the comparable groups technique. They tried to control as many sources of variation as possible, as witness their physically isolating experimental groups from each other, placing them in separate buildings or parts of the factory. What were the results of these two investigations?

This test resulted in a very appreciable production increase in both groups and of almost identical magnitude. The difference in efficiency of the groups was so small as to be less than the probable error of the values. Consequently, we were again unable to determine what definite part of the improvement in performance should be ascribed to illumination.⁷

The results of the third experimental series were quite unexpected, since the investigators *decreased* illumination rather than increasing it as in other studies. "As the level of illumination in the test group enclosure changed to a lower value, the efficiencies of both the test and control groups increased slowly and steadily."⁸

Snow goes on to report the findings observed in other experiments on illumination conducted in other factory situations in several geographical locations. Of all the experiments described in his paper, only the Hawthorne studies have gained any degree of prominence. The reason for this we shall see later. What was the general conclusion from the series of tests conducted under the National Research Council's auspices? Snow points out the significant factor in one of his summary statements:

Any investigation attempting to evaluate definitely the effect of illumination or some such influence must take the greatest of pains to control or eliminate all factors but the one being studied. Many of them can be con-

⁶ *Ibid.*

⁷ *Ibid.*

⁸ *Ibid.*, p. 274.

trolled or eliminated, but the one great stumbling block remaining is the problem of the psychology of the human individual.⁹

The results of the investigations were such that one could not help feel as Blum does in his book, *Industrial Psychology and its Social Foundations*: "In most such experimentation the sponsors would have thrown out the evidence and the 'crackpots' responsible; it would have been considered a nightmare to be repressed and suppressed."¹⁰

Why have the Hawthorne investigations become better known than any of the other illumination experiments? Even though the experimental methodology became more and more refined through the successive experiments, the simple answer became more elusive, as Snow concluded. Blum says: "It was clear that a direct relationship between illumination and production was nonexistent and that the answer would have to be obtained by attacking a different aspect of the problem."¹¹

The direction which the research then took is described by two of the Hawthorne researchers, Roethlisberger and Dickson:

Although the results from these experiments on illumination fell short of the expectations of the company in the sense that they failed to answer the specific question of the relation between illumination and efficiency, nevertheless they provided a great stimulus for more research in the field of human relations.¹²

The Hawthorne researchers then undertook a series of investigations designed to develop ways of studying the introduction of variables into work situations. Consequently, rest periods, working hour changes, and wage incentives were introduced and observations made of the workers' reactions to such variables. These studies were similar to the illumination experiments in that unpredicted results accompanied the changes as noted by Penneck:

From these tests have come some startling results, startling because they were unexpected as well as because they were sometimes contrary to accepted opinion. In the first place, there was a gradual yet steady increase in production regardless, to a certain extent, of test conditions imposed. . . . Now this unexpected and continual upward trend in the productivity throughout the periods, even . . . when the girls were put on a full 48-hour week with no rest period or lunch, led us to seek some explanation or analysis.¹³

⁹ *Ibid.*, p. 282.

¹⁰ M. L. Blum, *Industrial Psychology and Its Social Foundations* (2nd ed.). New York: Harper and Bros., 1957, Ch. 2, p. 25.

¹¹ *Ibid.*, p. 50.

¹² F. J. Roethlisberger and W. J. Dickson, *Management and the Worker*. Cambridge: Harvard University Press, 1941, p. 18.

¹³ G. A. Penneck, "Industrial Research at Hawthorne: An Experimental Investigation of Rest Periods, Working Conditions, and Other Influences," *The Personnel Journal*, 8:296-313, 1929, p. 304.

Three hypotheses were suggested as possible causes and each in turn was subsequently rejected. Pennock's summarization of the results of the investigation begins to develop for us a meaning of the term Hawthorne effect.

We have shown that fatigue is not a governing factor in the performance of the test group, and have partially evaluated the effect of increased incentive due to change in method of pay, which leaves us convinced that the rather remarkable results we have been able to obtain with this group are due mainly to changes in their mental attitude. This we consider a major accomplishment of our entire study.¹⁴

The impact of this finding was so marked that it led the Western Electric Company to begin a series of investigations designed to explore the nature of employee attitudes. These investigations were characterized by an employee interviewing program which had a "non-directive" flavor somewhat prior to the work of Carl Rogers. This latter group of studies was to become highly influential in the development of the area of industrial psychology now known as "human relations in industry." A complete account of the various investigations, including the illumination experiments at Hawthorne, is presented in the book, *Management and the Worker*, by Roethlisberger and Dickson.¹⁵ A retrospective view of the investigation and subsequent implications for industry are presented in *Hawthorne Revisited*,¹⁶ by Landesberger.

Two observations can now be made, one relating to the method, the other to definition. Methodologically, the procedure followed by the illumination investigators is not unlike that often observed in educational research. A change is introduced and promising results are secured. This promising lead is followed up by carefully controlled experimentation to study more precisely the effects of the change. The results are too often similar to those obtained in the illumination experiments. Regardless of what is done, we have difficulty in attributing observed changes in the dependent variable directly to the manipulated independent variable.

From the several studies presented, a working definition of the Hawthorne effect can now be developed. French provides a start by stating that the marked increases in production were related not to the manipulated changes but ". . . only to the special social position and social treatment they [the subjects] received."¹⁷ The special social treatment was created in turn by the "artificial" aspects of the experiment.

From this beginning, we might extrapolate the following definition of the

¹⁴ *Ibid.*, p. 309.

¹⁵ *Op. cit.*

¹⁶ H. A. Landesberger, *Hawthorne Revisited*. Ithaca, New York: Cornell University Press, 1958.

¹⁷ French, *op. cit.*, p. 101.

concept: *The Hawthorne effect is a phenomenon characterized by an awareness on the part of the subjects of special treatment created by artificial experimental conditions. This awareness becomes confounded with the independent variable under study, with a subsequent facilitating effect on the dependent variable, thus leading to ambiguous results.* To go much beyond this general definition at present is risky, due primarily to the lack of any real evidence derived from direct study of the effect as to its behavioral specifics or components. I trust, however, that it will provide a frame of reference for the rest of the paper.

WHAT ARE IMPLICATIONS FOR EDUCATIONAL RESEARCH?

Accepting for the moment the definition of the Hawthorne effect as presented, what implication does it have for research in education? One answer to this question can be found in a statement by Paul Rosenbloom in the recent symposium on educational research sponsored by Phi Delta Kappa. In describing recent experimentation with the mathematics curriculum in the state of Minnesota, Rosenbloom writes:

There is of course in educational experimentation a so-called Hawthorne effect. It is well known that in an experimental situation teachers and pupils are more highly motivated, so this makes a certain problem. You know, for example, that in educational experimentation, no matter what the hypothesis is, the experimental classes do better than the control classes.¹⁸

Ruth Strang, writing on reading research in the *Educational Forum* for January, 1962, echoes the comments made by Rosenbloom:

There are always uncontrolled variables that may influence the results. Thus at the end of the experiment, the investigator cannot choose but be apologetic; he cannot say with certainty that a given result was obtained by virtue of a particular teaching method which he wanted to study. The apparent differences in the two sets of results might be attributed to differences in the personality or enthusiasm of the teacher, the learning rate of the children, or any of the other factors we have already mentioned.¹⁹

The Rosenbloom and Strang quotations reflect the usual way of relating the Hawthorne effect to educational research.

¹⁸ Paul C. Rosenbloom, "Large-Scale Experimentation with Mathematics Curriculum" in *Research Design and Analysis*, R. O. Collier and S. M. Elam, editors, Second Annual Phi Delta Kappa Symposium on Educational Research, 1961, Ch. 1B, p. 11.

¹⁹ Ruth Strang, "Reactions to Research in Reading," *The Educational Forum*, 26:187-192, January, 1962, p. 187.

The Hawthorne effect can also be used to account for situations where no differences are observed between the experimental and control groups at the end of an experimental period. How can such a situation occur? It might occur when an experimenter approaches a classroom to measure student performance before conducting the experiment. The pretesting of not only the experimental but the control group can become a signal to the latter group that they are the subjects of an experiment. They might also be able to identify the experimenter's purpose. Consequently, the control group engages in activities leading to such improvement that the final result is that both groups perform equally well at the end of the experimental period.

The Hawthorne effect has plagued the research methodologist for a good many years. Brownell noted it approximately ten years ago in a critique of research appearing in the *Fiftieth Yearbook of the National Society for the Study of Education*:

More than once, serious doubt has been cast on the evidence for an experimental program of instruction when attention has been called to seemingly innocuous but actually influential factors. For example, the very novelty of a new system of instruction may make it attractive to teachers and learners alike, thus giving it a special advantage, and perhaps only a temporary advantage over the rival, traditional system of instruction.²⁰

He goes on to tell about an investigator who became increasingly irritated at the gains in reading shown under experimental versus control procedures over a short period of time. This investigator said that he would outdo all other investigators by demonstrating even greater gains in still a shorter period of time. The suggested technique was to administer a reading test in the most lackadaisical manner allowed by the test directions and then within a few hours test students with the second form of the test but administered under such conditions as subjects would be at highest possible pitch of zeal.

Retreating still further to the past to demonstrate the researcher's awareness of the problem, one finds reference to the effect appearing in McCall's *How to Experiment in Education*, written in 1923.

Though evidence on this question is meager, there is some reason to believe that the mere process of experimenting with new methods or materials of instruction attracts such attention to the traits in question as to cause an unconscious concentration, both on the part of teacher and pupil upon progress in these traits. As a result, it is supposed that a large temporary effort

²⁰ W. A. Brownell, "A Critique of Research on Learning and Instruction in the School," *Fiftieth Yearbook of the National Society for the Study of Education*, Pt. 1, *Graduate Study in Education*. H. B. Henry, editor. Chicago: University of Chicago Press, 1951, Ch. 6, p. 60.

is called for, thus causing a large but artificial growth, and that this artificial effort will evaporate if the novel methods or materials were used term after term.²¹

McCall even suggested a way of determining if the effect were present in a given experimental situation: "If each succeeding term shows a flagging of effort and an elimination or reduction of superiority, the existence of such ephemeral effort may be assumed."²² Interestingly enough, the Hawthorne studies showed no such reduction over time and thus novelty as a variable explaining results was rejected during the course of the investigations.

Even with McCall's early warning, many educators have persisted in using the comparable-groups method, with the correlated confounding of experimental variables by what is now called the Hawthorne effect. But the sophisticated research methodologist in education no longer jumps enthusiastically upon the bandwagon of new instructional methods like programmed instruction, educational television, language laboratories, team teaching, and other new techniques of instruction. Further, he cannot help but wonder whether recent curriculum revisions, which often show large gains in student knowledge, may not be contaminated by a type of Hawthorne effect.

As an example, I would suggest the recent situation in Wisconsin where the McGuffey Readers were adopted as supplemental texts to the regular basal readers. A news release noted that the pupils in the first four grades were as much as two years ahead of their grade level in reading ability.²³ The principal is quoted as saying that the students in the first grade were able to spell at fourth-grade level, according to nationally accepted tests. He then went on to credit the success of the reading program to a system of phonics as opposed to the whole word method. Has it occurred to the principal that the ruckus created by the McGuffey issue (which included the firing of a principal who objected to adoption of the McGuffey readers) may have caused teachers, students, and parents simply to concentrate more on the reading process than ever before?

WHAT ARE SOME SUGGESTED SOLUTIONS?

Recognizing that our research efforts are often contaminated or confounded by the Hawthorne effect, is there anything we can do about it? If

²¹ William A. McCall, *How to Experiment in Education*. New York: The Macmillan Co., 1923, p. 67.

²² *Loc. cit.*

²³ "Kids with McGuffeys Way Ahead," *Columbus Dispatch*, Columbus, Ohio, June 13, 1962, p. 9A.

we had a complete answer to the operation and hence control of the Hawthorne effect in educational research, there would of course be no need for this section of the paper. We must recognize, as Roethlisberger has in his book, *Management and Morale*, an inherent difficulty in social science research:

... the working hypotheses of these specialists [social scientists], particularly on their applied side, must be far less clear, distinct, and well formulated than in the more highly developed and exact engineering sciences. There is no simple way of thinking about or putting together the complicated events involved, and there is equally no simple way of dealing with them.²⁴

But complexity is no excuse for inaction. Steps should be taken if at all possible prior to the experimentation, so that an apology will not be needed at the end. Levitt, in discussing the possible influence of an experimental climate on research results in clinical psychology, stresses early attention to the problem:

... the experimenter should not lose sight of the possibility of a climate when he is designing his investigation, and should take whatever prophylactic steps are logically necessary to prevent its occurrence. After the data have been obtained, one may be led to suspect the operation of an experimental climate, but there is very little that can be done about it *post hoc*.²⁵

The principal problem involved in controlling the Hawthorne effect is the establishment of what is referred to in science as a "closed system." Such a system is one wherein no event outside of it influences events within it. The establishment of a closed system in educational experimentation becomes very difficult because the research activity must be done in psychological or socio-psychological environments, both of which are relative to the structure of the subjects. As B. O. Smith points out, "... the psychological environment is what the subject conceives it to be, and what he conceives goes back to his personal structure and the dynamics of his situation."²⁶ Thus an experimental situation may be one thing to one subject and a different thing to another subject.

Two general solutions have been presented. The first is to abandon, more or less, the conventional experimental-control group type of research design. This action was recommended by Brownell in 1951 and is re-emphasized by Strang in 1962 in the article on reading research previously cited. Brownell admitted that new advances in statistical analysis would facilitate

²⁴ F. J. Roethlisberger, *Management and Morale*. Cambridge: Harvard University Press, 1941, p. 145.

²⁵ E. E. Levitt, *Clinical Research Design and Analysis*. Springfield, Ill.: C. C. Thomas, 1961, p. 111.

²⁶ B. O. Smith, "Science of Education," in *Encyclopedia of Educational Research*, W. S. Monroe, editor. New York: The Macmillan Company, 1952, p. 1148.

the use of the comparable-group design but felt that its inherent limitation of failure to control all variables, plus the training needed to become sophisticated with the new statistical procedures, prohibited the widespread use of this design. As an alternative, he suggested a procedure originating largely in the field of developmental psychology. This procedure consists of continuous observation to detect changes in student behavior upon the introduction of certain events by the teacher. In short, it would be a carefully documented observation of the teaching-learning process as it was actually carried on in the classroom. Brownell recognized that many persons in education would not accept this as good research methodology, but he felt that it had many possibilities.

Such a technique was not overlooked in the Hawthorne studies. In fact, almost all of the investigations carried on after the illumination experiments were of this type. The investigators in effect abandoned the traditional single-variable approach within the comparable-groups technique and resorted to an observational procedure. The introduction of the observer, however, was not without cost. He became a "confidant" of the girls, who talked with him about their work and personal problems. It was this expression of feelings which confounded again the results of a set of planned studies and led ultimately to the interviewing program.

Strang suggests another procedure:

... it would be more useful to adopt the single group comparison type of experiment that is employed in the physical sciences. Here all the factors in the given situation are carefully described. Then one factor is modified and the resultant total factor is recorded. In this way we would gain some insight into the ways in which learning is affected by various complex conditions, including the pupils' prior experiences.²⁷

This procedure, plus the one offered by Brownell, are preferred over the comparable-groups approach by Strang because she feels the attempts to use comparable-group experimentation in educational research represents a premature attempt to be scientific. The result, in reading research, has been misleading conclusions having detrimental effects upon the teaching of reading, she thinks.

The second solution is to continue with comparable-group experimentation but to develop experimental designs which not only are internally valid but are also externally valid. External validity here means that generalizations can be made from the experimental situation to non-experimental situations which the former is said to represent.

Campbell identifies seven categories of variables affecting the internal validity of experimental design.²⁸ These are history, maturation, testing,

²⁷ Strang, *op. cit.*, p. 188.

²⁸ D. T. Campbell, "Factors Relevant to the Validity of Experiments in Social Settings," *Psychological Bulletin*, 54:297-312, 1957.

instrument decay, regression, selection, and mortality. He then goes on to point out that the interaction of these variables and of the experimental arrangements affect the external validity or generalizability of experimental results. Not all of the interactions are equally strong in various experimental designs, but they must be recognized. In a chapter on experimental design prepared for the AERA *Handbook of Research on Teaching*, Campbell and Stanley²⁹ indicate that some of the categories identified above can be somewhat discounted in comparable-group designs, but others cannot. They particularly point out the importance of what they call *reactive arrangements*. These are characterized by the ". . . play-acting, out-guessing, up-for-inspection, I'm-a-guinea-pig, or whatever attitudes,"³⁰ which are generated when the student knows he is participating in an experiment and tend to interfere with the external validity of the design. To overcome this limitation, the authors suggest that the experimental treatments and accompanying instrumentation (i.e., testing) be included whenever and wherever possible as part of the regular classroom procedure, if the results are to be generalized to other classroom units. In short, they would attempt to disguise the fact that an experiment is being conducted.

Correlated with this latter suggestion is a recommendation that, to avoid the singling out of individuals to be assigned at random to treatment or control groups and thus arousing their suspicions, regular classroom units with their regular teachers be employed as the means of minimizing individual reactions to experimental situations. Campbell and Stanley feel that such arrangements can be effective, since the process of experimentation is hidden from the student. They recognize, however, that if the *treatments* are other than variations of usual classroom events occurring at regular times in the yearly program, and/or if the *observations* (tests, etc.) are not considered a part of regular examinations, then we are still faced with the basic problem of cueing students.

Berg, however, raises the question whether it is moral and ethical to subject human beings to experimentation without their being aware of the fact.³¹ His position is that psychological experimentation, and hence much educational research, must be done with "volunteer" subjects. If this restriction is accepted, we are squarely on the horns of a dilemma. One cannot experiment unless he informs his subjects, but informing the subjects will invalidate experimental results.

Opposed to the Campbell and Stanley position are individuals who suggest that we not try to hide the fact that an experiment is in progress but

²⁹ D. T. Campbell and J. C. Stanley, "Experimental Designs for Research on Teaching." Mimeographed chapter draft for *Handbook of Research on Teaching*. N. L. Gage, editor, American Educational Research Association.

³⁰ *Ibid.*, p. 42.

³¹ A. Berg, "The Use of Human Subjects in Psychological Research," *The American Psychologist*, 9:108-111, March, 1954.

try instead to give equal exposure to both the experimental and control groups, thus establishing a type of experimental control over the Hawthorne effect. The National Research Council takes this position:

As much attention must be paid to students and teachers in all treatment groups as in those of particular interest to the experimenter. Equal excitement must be generated, and all groups must identify with their respective procedures.³²

Rosenbloom noted that this procedure was employed to a certain degree in conducting the mathematics experiment in the schools of Minnesota already mentioned. The investigators tried to make it something of a mark of distinction for schools to be considered a part of the experimental program.

Travers concurs with the idea that both the experimental and control groups should feel equally singled out, but feels that this technique is inferior to the suggestion that the groups be unaware of the fact that they are participating in an experiment.³³ He makes reference to a technique which has been commonly recommended for controlling the Hawthorne effect, and that is the use of a *placebo* treatment. Studies involving placebo treatments are quite common in the field of medicine, where one group receives the drug to be tested while the other receives a placebo made to appear and taste the same as the drug. This methodology is illustrated in Crest toothpaste experiments, advertised on television. Rosenbloom recognized the possible use of a placebo treatment in his study:

Now the ideal thing would be to have placebos, consisting of conventional texts in lithographed form and stamped "Experimental Edition." But so far we have not been able to make the necessary arrangements for that. The best we have been able to do this year in our ninth grade classes was to send to all control classes a lithographed pamphlet put out by McGraw-Hill called *Modern Mathematics for High Schools*. We gave instructions to the teachers of control classes to supplement the conventional text with this material, and to tell their classes that we are trying to find out whether a good conventional text, supplemented in this way, is better than the experimental text.³⁴

In a discussion of the use of placebo treatments in psychotherapy, Rosenthal and Frank suggest some criteria to test the effectiveness of this procedure:

³² *Psychological Research in Education*. Washington, D. C.: National Research Council, Publication 643, National Academy of Sciences, 1958, p. 24.

³³ R. M. W. Travers, *An Introduction to Educational Research*. New York: The Macmillan Co., 1958.

³⁴ Rosenbloom, *op. cit.*, p. 11.

To show that a specific form of treatment produces more than a non-specific placebo effect it must be shown that its effects are stronger, last longer, or are qualitatively different from those produced by the administration of placebo, or that it affects different types of patients.³⁵

CONCLUSION

The Hawthorne effect is not only a complex problem but also an important one. While the problem has been generally recognized and various solutions have been suggested as noted, there has been little direct experimentation to determine its qualitative and quantitative contributions to the results in research. Now, however, the U. S. Office of Education has provided Ohio State University with funds to investigate this problem directly over the next three years.³⁶ We are naturally hoping that this endeavor will result in better understanding of the phenomenon and thus enable us to control or discount its effects in a particular research study.

A story related by Herzog seems relevant to our discussion.³⁷ She tells of the little old lady who did her courting in the Nineties and who liked to tell about her grandmother's efficient chaperoning. Grandmother would just move into the living room where the two young people were sitting on the sofa. She would say, "Now you two young people go right ahead and visit and don't pay any attention to me. Just act as if I weren't here." As Herzog points out, there was some difference of opinion in the family about whether Grandmother thought they were acting as if she weren't there, but there was no doubt in anyone's mind about whether they were really acting that way. It takes a wary eye to be sure the research project is not playing a role like Grandmother's.

USOE Research Support

The United States Office of Education is one of the biggest supporters of research in education. The Bureau of Research has supported research at all levels and in about all categories. Glenn C. Boerrigter summarizes the organization and operation of the Bureau of Research and gives the outcomes of some specific research projects.

³⁵ David Rosenthal and Jerome Frank, "Psychotherapy and the Placebo Effect," *Psychological Bulletin*, 53:294-302, 1956, p. 297.

³⁶ Cooperative Research Project 1757, "The Impact of the Hawthorne Effect in Experimental Designs in Educational Research," Desmond L. Cook, Director.

³⁷ Elizabeth Herzog, *Some Guide Lines for Evaluative Research*, Childrens Bureau, Social Security Administration, 1959.

THE USOE'S SUPPORT OF EXTRAMURAL RESEARCH **Glenn C. Boerrigter*

This article summarizes the Office of Education's extramural research programs and describes the organization and operation of the USOE's new Bureau of Research. In addition, it discusses outcomes of several representative federally supported research and development projects.

Bureau of Research

Enactment of such recent federal legislation as the Vocational Education Act of 1963 and the Elementary and Secondary Education Act of 1965 has not only expanded USOE support of public education vastly, it has drastically changed the Office of Education's responsibility and altered its role in support of extramural research and development. The need for realignment of USOE organizational structure to reflect intent of the new legislation became increasingly apparent in the early Sixties. As part of administrative reorganization accomplished in July, 1965, a Bureau of Research was established.

Primary function of the new bureau is administration of extramural programs which fund research, development, dissemination, and training. The bureau brings together a number of extramural programs formerly scattered through the USOE.

Consolidation made possible the elimination of almost all proposal deadline dates. The bureau adopted a uniform application format, established common proposal review procedures, eliminated program area duplication, initiated a uniform small contracts program, and developed standard fiscal and contractual policies. While Bureau of Research personnel have continued to be responsible for proposal review and project monitoring, a new Contracts and Construction Service was created to handle fiscal and legal matters relating to contracts and grants.

Title IV of the ESEA broadened USOE legislative authority for support of research and related activities. The bureau may now support training of researchers and establishment of regional laboratories, for example. Moreover, this title amended Cooperative Research Program legislation (P.L. 83-531) to allow awarding of grants as well as contracts. Cooperative Research Program funds may now be used in financial agreements with public or private agencies, organizations, and individuals as well as colleges,

* FROM *Phi Delta Kappan*, June, 1966, pp. 554-57. Reprinted by permission of *Phi Delta Kappan*.

universities, and state departments of education. The old CRP was limited to contractual agreements with colleges, universities, and state departments.

Legislative Authority

The Bureau of Research is composed of five divisions: Elementary-Secondary Research, Higher Education Research, Adult and Vocational Research, Research Training and Dissemination, and Laboratories and Research Development. These divisions administer appropriate funds from the following legislative enactments:

1. P.L. 83-480—Agricultural and Trade Development and Assistance Act of 1954 (as amended). Sec. 104(k), *Research in Foreign Countries*.

2. P.L. 83-531—Cooperative Research Act, as amended by P.L. 89-10, the Elementary and Secondary Education Act of 1965. Title IV, Sec. 2(a), *Cooperative Research Program*. Title IV, Sec. 2(b), *Educational Research Training Programs*. Title IV, Sec. 4, *Educational Research Facilities*.

3. P.L. 85-864—National Defense Education Act (as amended) Title VI, Sec. 602, *Language Research*. Title VII A, *Media Research*. Title VII B, *Media Dissemination*.

4. P.L. 85-905—Education of the Deaf (as amended by P.L. 87-715). *Captioned Films for the Deaf*.

5. P.L. 88-164—Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963, Sec. 302, *Handicapped Children and Youth Research*.

6. P.L. 88-210—Vocational Education Act of 1963, Sec. 4(c), *Vocational and Technical Education Research, Development, and Training*.

New Programs

Contract and grant project support for basic research, curriculum improvement, demonstration, developmental activities, and small contracts program projects will be continued under the new bureau arrangement, as will programmatic support for the research and development centers. In addition, it supports regional laboratories¹ and research training authorized in Title IV of the ESEA.

Appropriations for these new activities, along with more generous funding for other extramural research programs, has increased total USOE funding ability for research and related activities to over \$100 million for fiscal year 1966. This compares with congressional appropriations of \$1,020,000 for USOE-funded extramural research nine years ago.

The shortage of personnel qualified to use such funds effectively has

¹ Hendrik D. Gideonse described the new regional laboratory program in the November, 1965, *Phi Delta Kappan*, pp. 130-33.

become increasingly evident, and it is alarming. We do not have adequate numbers of trained persons for high-level, sophisticated research and development. However, the new research training program will help to fill the gap. This program finances training of researchers at the undergraduate, graduate, and postdoctoral levels in fields that relate to or have implications for education. The training grants may be made to colleges, state education agencies, local school systems, and other public or nonprofit agencies, institutions, or organizations for periods up to five years. These agreements may be for traineeships, internships, personnel exchanges, institutes, undergraduate scholarships, graduate and postgraduate fellowships, and other types of training programs. Short-term intensive research training institutes will be supported, as will seminars, workshops, and other in-service training programs. In addition, program development grants will be available for the expansion of training staff, materials, and equipment.

While the USOE Educational Research Information Center (ERIC) has been under way since 1964, it has recently assumed an expanded role in the Bureau of Research. ERIC was established to collect, abstract, and index research reports relating to education. It is designed to assist the USOE in keeping abreast of completed and ongoing research in order to avoid unnecessary duplication of effort. Also, it will disseminate information regarding ongoing and completed research activities on a periodic and request basis. The center has over 1,000 completed documents reporting research supported by federal funds and is collecting thousands from other sources on a contractual basis. When the center becomes fully operational, it will be possible to request information about a given topic and receive an almost immediate response concerning pertinent documents in the center.

RESEARCH RESULTS

The following paragraphs describe only a few salient aspects of recently completed USOE-supported projects in educational administration, elementary and secondary education, and higher education. Much more evidence and information was produced by each of these projects, of course.

Educational Administration

While a great deal of research has been done on problems of concern to the educational administrator, until recent years there was little study of the administrative process itself. In a study of staff conflicts, Corwin² found that the number of reported staff conflicts is not related to the size of the

² Ronald G. Corwin, *The Development of an Instrument for Examining Staff Conflicts in the Public Schools*. Columbus: The Ohio State University, 1965.

professional staff, but that the heterogeneity rates of a staff are conducive to conflicts and heated discussion. However, the longer a faculty has been in school, the lower the rate of more intensive type of conflicts. If ample economic resources are available for a school, some types of conflict are reduced; but it is possible that some kinds may increase, since a wealthier district can employ more specialized personnel.

Nicholas and his associates³ in Detroit were concerned with school characteristics that determine its learning environment and with the kinds of challenge which confront school principals in "high" and "low" socioeconomic settings. In the low socioeconomic schools with "closed" climates, the pupils seemed to be the initiators of most action. In fact, there were so many problems in these schools that the principals had little time to initiate action of their own. The principal's office might be characterized as one of urgency, crisis, and harassment. The "press" on the principal in the "low" schools was primarily from the inside and the administrators were faced by time-consuming face-to-face problems. In fact, so much time was spent on these incidents that little was left for planning or leadership activities. In contrast, in the "open" and high socioeconomic setting the principal seemed to be the initiator of action, which was carried on in a businesslike manner, often by telephone. While this study does not suggest a desirable solution for the "low" setting schools, there appears to be sufficient evidence to conclude that normal staffing patterns are not adequate to meet the demands in such schools.

The community has long been the center of support for American public education. In this context, Smith *et al.*⁴ studied the financial support of public schools in relation to community structure. They limited their observation to one suburban community but concluded that school support exists with respect to issues, at a given level, and at a given point in time. The level of support for schools is dependent upon the kinds of people who live in a community and the interaction patterns that evolve. In general:

1. People who have attended college, have children of school age, and are active in formal organizations are relatively supportive and are active at the polls.
2. People who are renters, new residents, and have children of pre-school age are relatively supportive but are inactive at the polls.
3. People who are old residents (over fifteen years in the community) and are not in the labor force are relatively nonsupportive but are active at the polls.
4. People who have no children under age 18 and have not attended

³ Lynn N. Nicholas, E. Virjo, and William W. Wattenberg. *Effects of Socioeconomic Setting and Organizational Climate on Problems Brought to Elementary School Offices*. Detroit, Michigan, Wayne State University, 1965.

⁴ Ralph V. Smith *et al.*, *Community Support of Public Schools*. Ypsilanti: Eastern Michigan University, 1965.

college themselves are relatively nonsupportive and are inactive at the polls. Kimbrough *et al.*³ developed a Florida Scale of Civic Beliefs (FSCB) to study the power structure of two counties. While the study did not establish causative relationships between power structure and financial effort, it found that educational policy making is definitely affected in different ways by different power structures. One of the two counties studied could be characterized as monolithic in power structure, and several of the power wielders held official positions in the school system. Top influentials in this county, which had a one-party political system, held effective control over county and city officials. Civic beliefs were the same for the top and lower influentials. In this type of county, citizen participation as measured by voting was low, as was financial effort of the school district. In the other county, power was multi-structured and more open to the emergence of new leaders. There were two strong political parties, with wider citizen participation in voting. The rate of population growth was much more rapid and the county was willing to support a higher level of funding for its schools.

Elementary- and Secondary-Level Projects

A number of inconclusive studies have been conducted in regard to ability grouping at the elementary level. However, Borg⁶ concluded that the decision to employ ability grouping must be based on considerations other than achievement, because he did not find significant differences in achievement. He notes that girls tended more frequently to be overachievers while boys tended to be underachievers. When the study habits of grouped pupils were tested, the greatest differences occurred with the higher-ability children. Children in the random grouping situations consistently developed better study habits during the elementary school years than pupils in ability grouping situations. However, ability grouping does appear to influence positively sociometric patterns of pupils and attitudes toward school. Also, ability grouping appears to provide a less favorable climate for a feeling of belonging than does random grouping.

As an innovative study, Fitzgerald⁷ observed the effects of allowing junior high school children to select their own mathematics program in a highly diverse and rich environment. While no specific materials, ideas, concepts, sequence, or pace were imposed upon the child, the teacher did attempt to maximize the amount of effective work by each child. This indi-

³ Ralph B. Kimbrough *et al.*, *Informal County Leadership Structure and Controls Affecting Educational Policy Decision-Making*. Gainesville: The University of Florida, 1965.

⁶ Walter R. Borg, *An Evaluation of Ability Grouping*. Logan: Utah State University, 1956.

⁷ William M. Fitzgerald, *Self-Selected Mathematics Learning Activities*. Ann Arbor: The University of Michigan, 1965.

vidualized self-selection program appeared to be as good as conventional math programs, but it seemed to fail to challenge the bright students to learn up to their capacity. Since teacher-student roles are quite unique in this type of instructional approach, much additional investigation will be necessary to determine the values and disadvantages.

Through a status survey, Goldstein⁸ found that textbook costs for elementary and secondary schools rose 15 per cent from 1958 to 1961. During this same period all types of materials (textbooks, teachers' editions, and work manuals) rose 39 per cent. However, college textbook costs gained only 10 per cent during the same years. While the above increases may not seem large, even a moderate rise will amount to a very large per annum dollar figure.

Higher Education Research Projects

Increasing college enrollments have caused college administrators to look for economical means of improving instruction. The following attempts, while not conclusive, do indicate possible approaches. Stodola⁹ demonstrated the use of data processing equipment as an instructional device in a college measurement class. After developing concise specifications, he was able to use the equipment to reproduce tests and analyze the test results. Since data processing equipment can effortlessly formulate tests from a pool of items, it is possible to use tests as learning and diagnostic devices concurrently. Item analysis of test results allows the instructor to reconsider points not fully understood by the class. It is worth noting that a majority of Stodola's students favored the use of practice tests followed by a discussion of the results.

Concluding Remarks

The results of the projects discussed above are a small sample of the findings of projects supported by the Office of Education. It is estimated that over 1,000 projects are currently under way, as well as nine research and development centers. While some projects may not produce significant results, an ever-increasing body of tested knowledge is being built through project and program support. One can predict that it will take decades of tireless and massive basic and applied research effort to solve the mysteries of human learning and to develop adequate teaching strategies for all types of children and adults. While federally supported research efforts in education were virtually nonexistent a decade ago, and while both effort and

⁸ Harold Goldstein et al., *Index of Textbook Prices*. Urbana: University of Illinois, 1965.

⁹ Quentin C. Stodola, *Frequent Classroom Testing as a Learning Aid Using Data Processing*. Fargo: North Dakota State University, 1965.

results were limited during this decade, we can truly say, in light of present congressional appropriations for research and related activities in education, that an important effort to improve education is under way.

Education Research Information Center

According to Lee G. Burchinal and Harold A. Haswell, ERIC (Education Research Information Center) was created in May, 1964, by the United States Office of Education to meet the need for storage, retrieval and dissemination of information on educational research.

This system keeps the specialist where he is but takes his information to clearing houses at Harvard, City University of New York, Ohio State, and other such centers. Each of these centers specializes in one area of research. Each selects and abstracts the articles sent to it. Some of the articles sent to them are sent out nationally, some are judged to be of only local value, and others are not used at all. A byproduct of ERIC is a system of indexing using microfiche or microcord.

It is the intention of the ERIC system to link all educational systems so that research information will be readily available to everyone.

A further summary by Education U.S.A. follows the selection by Burchinal and Haswell.

HOW TO PUT TWO AND A HALF TONS OF RESEARCH INTO ONE HANDY LITTLE BOX *

Lee G. Burchinal and Harold A. Haswell

ERIC was created in May 1964, to "facilitate and coordinate information storage and retrieval efforts in all areas of educational research." As an educational information service, ERIC took its cue from the hard sciences—physics, mathematics, chemistry—for which rapid methods of collecting and disseminating research results were developed years ago. The West Coast missile scientist cannot wait for pertinent work of his East Coast colleague to appear in an aerospace journal. Nor can he afford to spend time in research that may duplicate the research already done by a scientist elsewhere. He must know what his colleagues are doing, and he must have access to such knowledge quickly.

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The educator is in a similar position. He cannot afford to isolate himself or his work from the work being done by his colleagues all over the country. School systems everywhere are being encouraged to innovate and change to meet modern problems and modern opportunities.

The Office of Education saw this general need to give fast, useful circulation to the work of all men and women who study, shape, and improve education. But the Office of Education also had a good reason for "inventing" ERIC—the great number of research projects OE itself supports. Since 1956, when the Cooperative Research Act was passed, the Office's annual outlay for research has grown from \$2 million to \$100 million.

Studies conducted at OE Research and Development Centers, plus scores of other federally supported projects, were producing innumerable and important research papers, papers that many educators should, but probably never would, have the chance to read.

This widespread ignorance of current research is only one problem. Tracing a report to its author can also be frustrating; he frequently has no copies available. Thus, research results are circulated to a pitifully small proportion of those who could use them. Too often vitally important research papers are permanently and uselessly interred in file drawers.

ERIC's purpose is to do away with hit-and-miss information exchange methods and increase the utilitarian value of research at least a hundredfold by simply letting people read and absorb it. . . . ERIC disseminates information in much the same way that other Government agencies and private industries do. There is, however, a basic difference between ERIC and other national information systems: ERIC is decentralized.

The Office of Education is not gathering all education research documents and research specialists under a single roof in Washington. Rather, the specialists are left where they are. Their field operations become informational clearing houses or research documentation centers in the ERIC system.

Clearing houses are already operating or being developed in OE's Research and Development Centers at Harvard, at City University of New York, and at the Ohio State University.

Each center specializes in one area of research—music instruction and education at Ohio State, for instance, and school and college administration at Oregon—and is aware of research projects in its specialty carried on everywhere in the country.

The center specialists, working under Office of Education grants, clear documents for inclusion in the ERIC-central system. If a paper is judged desirable, it is carefully summarized in 250 words. This is the start of the process of absorption into ERIC. When the process is complete, the document will be known in outline throughout the educational world and readily obtainable in unabridged form.

Not all research papers, of course, are acceptable. Roughly a thousand

of every 5,000 examined are not acceptable. Those rejected may have only local interest, their methodology may be poor or descriptive material too superficial to have any value. Their titles may make them look good enough to arouse the curiosity of the specialist. But they don't get any further.

Another 2,000 documents fall into a second category. They are worthwhile for people in certain specialized areas. But since they are not nationally significant, they are kept at the specialized clearinghouse instead of being included in ERIC-central. The clearinghouse itself does a limited amount of dissemination in the case of specialized papers such as these.

The remaining 2,000 are of ERIC quality. That is, they will be included in the central system and publicized to every center and potential user. We anticipate that the ERIC-central system will eventually grow by 10,000 documents a year.

Résumés received in Washington from the centers undergo further scrutiny for writing, professional quality, abstracting, indexing, and general appropriateness of theme and document. If the ERIC-central staff (supported by consulting specialists) approves them—into the system they go for storage.

A document being inducted is indexed according to a system developed by ERIC-central. Index terms must be in common use if the decentralized concept is to work. This is leading to the development of an educational thesaurus, which we consider an important by-product of ERIC's own research.

The thesaurus will be a comprehensive listing of terms, such as "curriculum," "programmed instruction," "transfer of training," and so on. This theoretical work is going on at Western Reserve University. Elsewhere, practical contributions are being made by interested organizations and individuals under the direction of ERIC's terminology group. We expect to have a working thesaurus, in draft form, by June of this year.

The abstract and index terms are combined on an ERIC résumé form which becomes the basic description of the document. This form, together with the entire document, is then copied on *microfiche*, the heart of ERIC's dissemination system.

Microfiche is a photographic technique developed in France. The word means, literally, *microcard*. Each 4-by-6-inch sheet of film carries multiple rows of images taken from art work, printed or typewritten sheets, photo-stats, or proof copies. Large reports can be reproduced quickly and inexpensively on several sheets of microfiche. The equivalent of millions of sheets of paper can be stored in a few drawers or file cabinets.

Small, portable microfiche readers are available at low cost (\$100 to \$135). Projected on ground glass, the image of the document is actually larger than the original printed page. More expensive reader-printers are available (\$750 to \$1,500). These produce hard copy (photo reproductions) at the touch of a button. ERIC has also concluded an arrangement

thanks, others are formal requests for microfiche or hard copy. All buttress our belief that exchange of information through ERIC can be of great service in improving the quality of education throughout the Nation.

ERIC is a fledgling operation as of this moment, but it has all the feathers necessary for flight. We feel confident that it can exploit the potential of OE-related research and development centers, regional laboratories, and colleges and universities in developing a dissemination network. It will take advantage of the natural channels available through State departments of education, professional educational associations, and other educational agencies.

We believe the day is not far distant when the ERIC network will link universities, professional organizations, school systems, boards of education—the entire educational community—to speed all research results to places *where* they are needed and *when* they are needed. That is our goal.

TWELVE RESEARCH CLEARINGHOUSES DESIGNATED *

Editors of Education U.S.A.

Twelve clearinghouses for education research findings will be set up under a \$1.7 million program to be carried out by the U.S. Office of Education's Educational Research Information Center (ERIC). Each will collect data in a particular area of education.

"The rate at which this information emerges will accelerate in the years to come," U.S. Comr. of Education Harold Howe II said. "Unless it is made readily available to teachers, administrators, and researchers themselves, progress in education will be thwarted. Through the Educational Research Information Center, the U.S. Office of Education is coordinating a major effort to assure that every child in every school may benefit from advances in education."

The clearinghouses will acquire information, select from it, prepare abstracts, and index relevant documents. Each center will be staffed by experts in the subject area and by specialists in modern information retrieval techniques. ERIC will store the full texts of documents on microfilm and make the materials available at low cost to educators in pamphlet or microfilm form, and will publish announcements of all new materials acquired. Locations, areas of specialization, and amounts of federal money are:

* FROM *Washington Monitor* by the editors of *Education U.S.A.*, July 20, 1966, p. 212. Copyright 1966 by the National School Public Relations Association. Reprinted by permission of the National School Public Relations Association.

- *City U. of New York*, preparation of urban school personnel, \$135,405.
- *U. of Oregon*, educational administration, \$90,365.
- *New Mexico State U.*, small schools and rural compensatory education, \$130,337.
- *U. of California at Los Angeles*, junior colleges, \$108,731.
- *U. of Michigan*, counseling and guidance, \$90,903.
- *Ohio State U.*, two clearinghouses—on science education, \$122,031, and on vocational and technical education, \$88,030.
- *Indiana U. Foundation*, Bloomington, Ind., reading, \$155,855.
- *Yeshiva U.*, disadvantaged children and youth, \$230,106.
- *Modern Language Association of America*, New York City, teaching of foreign languages, \$198,045.
- *Center for Applied Linguistics*, Washington, D.C., linguistics and the uncommonly taught languages, \$164,140.
- *Council for Exceptional Children*, a Dept. of the National Education Assn., Washington, D.C., \$253,933.

Regional Laboratories

One of the most universal innovative ideas of the past few years is the creation of regional laboratories. Sponsored by the U.S. Office of Education, these laboratories are to bridge the gap between research and practice primarily affecting secondary and elementary schools. The laboratories are incorporated. Each is composed of a self-created regional area of the country and has its own governing board.

The laboratory is to bring together all the resources of the region to solve the educational problems that are the program of the laboratory. The following selection summarizes the purposes and locations of these laboratories.

TWELVE REGIONAL LABORATORIES FUNDED *

Federal support totaling more than \$7 million has been approved by the U.S. Office of Education for 12 regional education laboratories to be set up under Title IV of the Elementary and Secondary Education Act of 1965. These laboratories, conceived as associations of colleges and universities, state departments of education, and other education groups concentrating

* FROM *Washington Monitor* by the editors of *Education U.S.A.*, July 20, 1966, pp. 211-12. Copyright 1966 by the National School Public Relations Association. Reprinted by permission of the National School Public Relations Association.

their efforts on particular education problems, previously received development grants from USOE which led to the full funding.

In a recent letter to Secretary of Health, Education, and Welfare John W. Gardner, President Johnson expressed his approval of the laboratory idea. "The laboratories," he said, "should be large and significant enterprises, equal in size and scope to the major tasks they seek to accomplish. They ought to be conceived as comparable in their way to the large-scale laboratories of the Defense or Atomic Energy establishments. Nothing less will do. Their missions are equally important."

Among the projects of the newly formed laboratories are development of packages of new instructional materials for teaching kindergarten and primary grade children, demonstrations of model schools providing individualized instruction, special education programs for various ethnic groups (including Negroes, children of Mexican descent, American Indians, and Eskimos), establishment of an evaluation unit providing for changes in laboratory programs while they are in progress, creation of a curriculum materials dissemination service, new programs designed to reduce educational deprivation caused by dual school systems or limited resources of rural schools, and establishment of innovation centers for introducing new teaching techniques.

The laboratories, their directors, and the participating states are:

- *Southwestern Cooperative Educational Laboratory*, Albuquerque, N. Mex., \$335,800; to serve Arizona, New Mexico, Oklahoma, and Texas; Paul Petty.
- *Research for Better Schools, Inc.*, Philadelphia, Pa., \$466,447; to serve Delaware, southern New Jersey, and southeastern Pennsylvania; James W. Becher.
- *Far West Laboratory for Educational Research and Development*, San Francisco, Calif., \$383,500; to serve northern California and northern Nevada; George Rusteika (interim director).
- *Central Midwestern Regional Education Laboratory, Inc.*, St. Louis, Mo., \$737,744; to serve southern Illinois, Kentucky, eastern Missouri, and central and western Tennessee; Wade M. Robinson.
- *Mid-Continent Regional Educational Laboratory*, Kansas City, Mo., \$811,183; to serve eastern Kansas, western Missouri, eastern Nebraska, and central Oklahoma; Robert S. Gilchrist.
- *Northwest Regional Educational Laboratory*, Portland, Oreg., \$513,810; to serve Alaska, Idaho, Montana, Oregon, and Washington; Carl Jensen (interim director).
- *Rocky Mountain Educational Laboratory, Inc.*, Greeley, Colo., \$368,200; to serve Arizona, Colorado, Idaho, Kansas, Montana, Nebraska, Utah, and Wyoming; James M. Thrasher.
- *Appalachia Educational Laboratory*, Charleston, W.Va., \$378,650;

- to serve West Virginia and the Appalachian counties of Kentucky, Ohio, Pennsylvania, Tennessee, and Virginia; Howard B. Aldman.
- *Southeastern Educational Corporation*, Tallahassee, Fla., \$362,100; to serve Alabama, Florida, and Georgia; J. Stanley Marshall (interim director).
 - *Upper Midwest Regional Educational Laboratory*, St. Paul, Minn., \$650,300; to serve Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin; Stanley B. Kegler (interim director).
 - *Center for Urban Education*, New York City, \$1,228,110; to serve the metropolitan New York area; Albert Bowker (interim director).
 - *Southwest Regional Laboratory for Educational Research and Development*, Santa Monica, Calif., \$902,725; to serve Arizona, southern California, and southern Nevada; Richard Schutz.

An additional seven laboratory proposals await USOE decision on full funding.

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The Changing Role of Federal Government in Education

Federal Government's New Role in Education

Defining a Role

The new role of the federal government can best be stated by those who are establishing this role. Chapter 1 carried a message from the President. It should be reviewed at this time. The following selection by Vice President Hubert H. Humphrey further defines the new role of the federal government in education.

YOUR GOVERNMENT, YOUR SCHOOLS *

Hubert H. Humphrey

Twenty-one years ago President Franklin D. Roosevelt issued an urgent call to Congress for federal assistance to education. He called such as-

* FROM *The PTA Magazine*, September, 1966, pp. 8-9. Reprinted by permission of *PTA Magazine*.

sistance "our national obligation to all our children." "This country," he said, "is great enough to guarantee the right to education adequate for full citizenship." And President Lyndon B. Johnson has said that we seek to give every child all the education that he can take, all he can possibly absorb.

These are national commitments.

We are living in a time when our obligation to children is finally being fulfilled. And no one is more responsible for this than you, the PTA. Your twelve million members have long since proved that citizenship in America is active, not passive.

I think you can take it as something of a compliment—a righthanded compliment, so to speak—that extremist groups have in recent years chosen the PTA as a target. What extremist groups, both left and right, say sounds different. But what they do is similar. They share a common contempt for the democratic process and for democracy itself.

The best way to defend and extend democracy is to put it to work meeting people's needs and aspirations. And that is just what is being done in our great programs of federal legislation for education.

All of you know what the Eighty-ninth Congress, the most recent Congress, has accomplished for education. I shall, though, give you some illustrations of how the new programs work. First, some dollars-and-cents figures. In constant dollars, over-all expenditures on education in the school year 1966-67 will be double what they were ten years ago.

And the federal contribution to this total outlay has increased even more dramatically, even though great tribute is due the local governments for their excellent support in most areas of education. Expenditures for education through the U.S. Office of Education alone are running at a rate twenty times what they were a decade ago.

Until last year the federal government gave no general aid to elementary and secondary schools. But for the coming year the Administration has requested over \$1.3 billion for this purpose.

The long debate over federal aid has dwindled away. We in Washington believe in local control. We will see to it, working together, that there is no federal domination. Now that the fear that federal aid would mean federal control has been laid to rest, we can turn from false issues to real ones. We can cease arguing whether federal dollars should be put into our schools, and start discussing how to put them to the best use.

On this score Secretary John W. Gardner has said: "The need for [school aid] money is less acute than the need for new ways to use it. . . . What's needed is a combination of money and good educational ideas."

It is in this spirit that the funds allocated under Title I of the Elementary and Secondary Education Act—the bulk of the new federal funds—are directed particularly to the schools and the children who need help most, those in low-income urban and rural areas. We need to bring all Americans up to a level of educational participation and excellence that is consistent with their best abilities.

In one problem school in Harlem, for example, the staff has been strengthened so that its ratio of teachers to students is one to eight. Its ultra-modern playground and its fresh decoration, inside and outside, have made it a delight to the eyes. In that school the principal called her teachers together and said, "At last we have everything we needed and wanted. Now it's up to us to do the job."

At a nearby junior high school—a junior high where the children were supposed to be uninterested—the new federal funds have made it possible to keep the library open after school hours. Those uninterested students have logged out 40,000 books in five months.

In one elementary school in my own city of Minneapolis 22 mothers have been employed as part-time aides, and there is a waiting list of 115 applicants. They work as home visitors and as playground monitors. They read to children and do clerical chores.

Innovation is not confined to the big cities, either. A skilled teacher in a poor farming community in Iowa meets with ten small groups of housewives each week to tell them what they can do at home with their preschool youngsters. The topics at the sessions range from the importance of books and educational toys to instruction in making finger paint from liquid starch and food coloring. They call it "Project Home Start." It costs less than \$10,000 a year.

In another rural area the new school nurse found that a child everyone thought mentally retarded was actually suffering from severe but remediable physical handicaps. And this story could be repeated a thousand times. There is an eye doctor in Washington, D.C., who has demonstrated that many who were considered mentally retarded were only the victims of eyesight trouble and of hearing defects. Yet literally hundreds of thousands of young boys and girls have never known what is their trouble. We have been so busy treating the many, educating the multitude, that we have forgotten the individual. But education in a democracy must be an individual experience.

I haven't even mentioned the many imaginative uses being made of federal funds for supplementary educational services under Title III of the Elementary and Secondary Education Act. The fact is, a veritable explosion of creative thought and experiment is under way in many of our school systems.

But not everywhere. You will be surprised to learn that much of the money available to the states and localities isn't even being used. Yet I hear people say, "Oh, we must appropriate more!" That is mainly because much of the money is dedicated to creative use of funds. This is important, but what is most important is, How do we design new ways and means of communication from teacher to student, from teacher to student to parents, from teacher to student to parents to the community? We have much to learn.

Is the education explosion happening in your community? For good schools mean nothing unless they are in your community. It is in your community that good schools must exist.

Then, many of the neediest rural school systems have not yet been able to get organized to take advantage of the new opportunities. Here the various state departments of education—and the Act provides funds to strengthen them—can be of great assistance.

Again, some communities have not been participating fully in Project Head Start. Last summer this project was a real godsend. More than 500,000 culturally deprived children took part in it, and it taught us more about teaching and about the limitations of teaching under present methods than any other experience we have ever had. We learned more about children, more about neighborhoods, more about parents. "A little child shall lead them," and indeed, a little child, three to five years of age, led teachers and school boards and community leaders right back to the source of trouble—the family, the community, the areas of deprivation. We had literally an educational revolution in Project Head Start.

In spite of this striking success, school officials have generally not pushed Project Head Start with federal funds during the regular school year. Only 7 per cent of the children in the preschool age group were in classes (including kindergarten) under the school aid program during the past year. Head Start is still a summer project. But if it is good in the summer, it is good all year, and I think we ought to give it that kind of emphasis. I ask you to give it your attention, and I know that if you do, the next time I talk to you I will be able to say that at least 27 per cent of the preschool children in the United States are getting some educational experience.

I hope that the PTA will sponsor a national inventory—an inventory of all the new ideas, the innovations in education, educational techniques, programs, methods, and materials. Let's find out what each of us is doing all across America. If we don't make an inventory of it, these ideas and the experiences will be lost. We must share.

"The foundation of every state is the education of its youth," as Diogenes said long ago. Foundations are laid in accordance with what we seek to build upon them. Our goal is to bring into being here in the United States not a handout state or even a welfare state but a state of opportunity. We seek to give effect to the "great law of culture" laid down by Thomas Carlyle: "Let each become all that he was created capable of becoming."

To achieve this goal, it is not enough that each American child have the fullest opportunity to develop his talents. He must also be able to put them to full use. That is why we are seeking to open all the doors of educational opportunity that have long been closed to those of the "wrong" skin color, religion, or last name. That is why we are creating steadily expanding opportunities for employment and promotion. That is why we are promoting

scientific and technological innovations and their prompt application throughout our economy.

Because we want everyone to put his talent to work, we now are promoting the Youth Opportunity Campaign, calling upon employers and unions and churches and schools and mayors and governors—yes, everyone—to give a helping hand to all young men and young women who need a summer job, to bring them into the mainstream of American Life. This is why we have launched the war on poverty: not to make poverty tolerable, but to break people out of the prison of poverty—the poverty of the spirit, the poverty of the mind, the poverty of the soul, and the poverty of the purse.

And this is why we are working for an America worthy of its people—its water fresh and wholesome, its air clear and free of pollution, its cities fit and safe places in which to live, its open spaces refreshing to the spirit.

Moreover, our vision of the Great Society does not stop at the water's edge. The ideal of Roman education was a sound mind in a sound body. We have set our sights higher. We seek a sound America able to help build a sound world.

And we have chosen education as the best means to achieve this. President Johnson has said, "Education lies at the heart of every nation's hopes and purposes. It must be at the heart of our international relations."

Therefore, we look forward to a world in which "nation shall not lift up sword against nation, nor shall they learn war any more."

The road to that kind of world may be long and hard. But we know that, as Jefferson said, man cannot be both ignorant and free. There is no genuine peace unless man is enlightened, unless his mind and his spirit are awake. The road to freedom begins in the classroom—here and everywhere on earth.

Finally, a personal word.

Education was no plentiful commodity when many of us grew up. The tale has been told many times of how President Johnson—and I, too, for that matter—dropped out of school to work, then later returned, and, later still, taught. We got our college degrees far later than many young people today. But we finally got them. And because we did, the path lay open to a world ahead. It was a hard world, true, but it was ours to enter.

How many millions of American men and women, for a million heart-breaking reasons, did not have that opportunity? How many millions of talents today lie unused, or woefully underused, because there was no money, there was no encouragement, there was no hope, back at the crossroads of life?

Today America stands as the most rich and powerful nation in the history of the earth. There is no depression. There are no bread lines. There are no windstorms grinding American dreams to dust.

Can we, in our wealth and power, afford the waste of a single American

child? Can we find any reason for less than excellence of education and fullness of opportunity for all? I think not.

We have made our national commitment. We intend to keep it.

I ask you to remember the words of Thomas Wolfe as your inspiration: "To every man his chance. To every man his shining golden opportunity. To every man, no matter what his birth, a chance to rise to whatever his manhood or his vision can combine to make him. This is the promise of America."

And, my friends of the National Congress of Parents and Teachers, you can help make that promise come true.

National Commitment: National Objectives

According to Francis Keppel, former U.S. Commissioner of Education, it is clearly in the national interest to foster strong local and state educational institutions, to encourage to a greater extent their involvement in solving today's problems, and to assist them in keeping pace with the social and economic changes and the greater demands on education. But for the ultimate answer on where American education is going and what the nation will expect of it, we must look to the states and communities, not to Washington. Mr. Keppel, now assistant secretary of the U.S. Department of Health, Education and Welfare, concludes, that federal aid is designed to assist local and state agencies in strengthening their educational programs for the best good of the youth of America.

THE NATIONAL COMMITMENT TO EDUCATION *

Francis Keppel

A wonderful thing happened to 1965 on its way into history. It became a year to remember: as the year the nation fully recognized it can reach its potential only through education; as the year the notion that federal aid to education meant federal control was branded as mythological; as the year a citizenry, expressing its will through elected leadership, called on education to take the lead in charting our nation's course.

Quite suddenly—or so it seems—the educator is a captain in a

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nationwide crusade to improve the quality of life; goals that seemed unreachable have become practical and close at hand.

Perhaps it is symbolic of the new reliance on education as the force of national survival that:

- An Air Force base phased out of existence in Presque Isle, Maine, becomes instead a junior high school and a thriving vocational institute of 700 students.
- A former ordnance depot in Rossford, Ohio, becomes the home of a vocational school serving seventeen school districts in five counties.
- A former Marine Corps installation in Portsmouth, Virginia, is now the site of a private college that enrolled more than 500 students in the first semester.

This kind of conversion of military real estate, worked out at federal, state, and local levels, means that national defense is a many-sided responsibility in which education is a strong partner.

Education is on the march; it needs room, and it is ready to fill immediate and long-range economic needs in communities that are converting their sources of strength—communities on the move. When a school flourishes on a former parade ground or on any site, a country striving for peace is going in the right direction, and education is achieving the stature that President Johnson urged for it as the first business of the nation.

In January, 1965, the President closed his education message to Congress with these words:

We are now embarked on another venture to put the American dream to work in meeting the demands of a new day. Once again, we must start where men who would improve their society have always known they must begin—with an educational system restudied, reinforced, and revitalized.

The role of the federal government in this American venture is one of far greater commitment to education.

This commitment embraces an ideal of the best education possible for every citizen. It entails a concern for the quantity and quality of education at all levels. It represents a forthright recognition that as a nation we have not really measured up to our ideals of educational opportunity; and it is an assumption of the moral responsibilities education must meet in the fields of social and economic progress.

Education can help bring our country to the heights of freedom in which there is no place for the blight of prejudice. The Civil Rights Act of 1964 spells out the specific responsibility to the Office of Education and other federal agencies. It states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be deprived of the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

If the problem is entrapment in poverty, the education job ranges from preschool programs for children of impoverished families to adult training, toward freeing new and older generations alike for achieving satisfying, dignified lives.

In an eloquent, history-making response to the needs of children of low-income families, the 89th Congress passed the Elementary and Secondary Education Act of 1965 to close gaps in educational opportunity that have existed too long.

By now, most people are familiar, at least in general terms, with the new education bill.

Most analyses concentrate on the direction of \$1.3 billion into school programs serving some five million children in families with incomes of less than \$2,000 a year. The scope of the legislation with its broader assistance at the elementary and secondary levels, the assistance to students of both public and nonpublic schools, has been intensively studied and discussed. But there is still another important fact in relation to the new legislation of particular relevance to any discussion of the federal role in education.

That element is the independence, written into the law, of state and local initiative and the administrative capability to make the program work. For example:

- One part of the law provides funds to put more library books, textbooks, and instructional materials in our schools. The states will make the necessary plans, administer the programs, and own the materials.
- Another part of the bill calls for establishing regional laboratories to speed educational innovation. The program begins with plans drawn up by groups representing state departments of education, local school systems, and universities.
- Still another provision in the new education act provides funds to strengthen state departments of education, which must carry the workload of administration.

By far the larger part of the funds will go into development of imaginative, workable plans at the local school system level.

Inherent in these features of the new legislation is a call for a higher order of state, local, and federal cooperation to serve the national interest.

Historically, federal assistance programs develop in response to acute need and represent an accompaniment of the national progress. That was the case in 1787 when the Northwest Ordinance set aside land in each township for education; that was still the case in the nineteenth century when the Morrill Land-Grant Act of 1862 was passed; and in the twentieth century when the National Defense Education Act of 1958 became law.

There have been other such milestones in the history of education legislation. There is also ample precedent in national history for still another

significant trend in the educational role of the federal government. I am speaking of the increasing reliance of the federal government on higher education for leadership in solving immediate problems.

To find the precedent, we have only to recall the college experimental stations that helped develop our agriculture through practical application of new discoveries. The dramatic success of this program is evident in our abundance of food, not only for our own people but for others.

Today, institutions of higher education are called on by the federal government to bring their resources and talents to bear on such urban challenges as mass transportation, land use, unemployment, and many others.

It is clearly in the national interest to foster strong local and state educational institutions, to encourage their involvement in solving today's problems to a greater extent, to assist them in keeping pace with the social and economic changes and the greater demands on education. But for the ultimate answer on where American education is going and what the nation will expect of it, we must look to the states and communities—not to Washington.

On October 12, 1964, President Johnson said in Denver, Colorado: "We must keep control of our schools where it belongs, with the people. I believe that you should run your own schools, and you will do that as long as I am President."

On November 1, 1964, the President issued policy papers dealing with various domestic problems and said in regard to education: "We must strengthen our state and community education systems. We do not intend to forsake our tradition that schools and colleges should be controlled at the local level."

As mounting costs and enrollments at all levels of education brought more pressure to bear, 1965 had to be the year that we swept away the myths and the old obstacles and united in a greater commitment to education. We have strengthened education, kept faith with the states, and kept faith with the youth of America; and that is what federal assistance to education is designed to do and what it can do best.

Some New National Objectives

At a meeting of the Council of Chief State School Officers in Honolulu in November, 1965, Keppel then U.S. Commissioner of Education, gave a list of "our new national objectives" in education.

'NEW NATIONAL OBJECTIVES' IN EDUCATION *

Meeting with members of the Council of Chief State School Officers in Honolulu in November, Commissioner of Education Francis Keppel deplored the red tape involved in the new Elementary and Secondary Education Act and asked for advice on how to "slenderize" the requirements for mountainous quantities of multiple forms and carbon copies.

Part of the paperwork, he said, is going to be inevitable because the President and Congress expect an annual accounting. He firmly denied that the act means federal control.

Keppel gave the chief state school officers a list of "our new national objectives" in education:

1. To raise the quality of education in our schools everywhere and for everyone. In the twentieth century we cannot tolerate second-class education if we intend to remain a first-class nation.
2. To bring equality of educational opportunity to every child in America, whatever his color, or creed, or handicap, or family circumstance.
3. To provide vocational and technical training that is geared to the economy and technology of today and tomorrow, not of yesterday.
4. To make college and university study possible for all young people who can benefit by it. In our advanced economy, we can no longer afford to regard higher education as a luxury.
5. To bring our educational resources to bear directly on problems in our communities—as an indispensable social instrument in fashioning the Great Society we have chosen to become.

Translating Objectives into Action

The question was asked, "What were the ten major educational events of the year 1965?" The answer by William D. Boutwell reflects the influence of the federal government on education, indicating that national objectives were being translated into action programs.

* FROM *Phi Delta Kappan*, January, 1966, p. 280. Reprinted by permission of *Phi Delta Kappan*.

WHAT'S HAPPENING IN EDUCATION? **William D. Boutwell***Q****What were the ten major educational events of the year 1965?****A**

Last year, 1965, was another bumper year for education, primarily because of action taken by the President and the U.S. Congress.

1. *The Elementary and Secondary Education Act*. This act made possible greatly increased supplies of books and other materials for school libraries and classrooms and assured expansion of services to impoverished children. For the first time private and parochial schools were able to benefit from such federal assistance.

2. *Higher Education Act*. Thousands of promising youth will now find it possible to go to college aided by federal scholarships. Elementary and secondary school teachers will benefit from fellowships.

3. *Teacher Corps*. This program is designed to enable school systems with severe educational problems to engage capable teacher volunteers and pay them with federal funds. Congress approved the program, but the President must now go back to Congress for the money.

4. *Project Head Start*. More than 500,000 preschool children benefited from this popular summer program. A related program, the Job Corps, ran into difficulties, but the city-centered Community Action Program, combining study and work, made progress.

5. *Arts and Humanities Act*. Although the initial appropriation is small (\$21 million), this act places Congress firmly on the side of cultural development— theater, dance, painting, music, history, and so on.

6. *Interstate Compact for Education*. Adopted by more than half the governors, this agreement will enable states to share ways of improving education. It is expected to go into action early in 1966.

7. *Strengthening the education administration in Washington*. With federal aid to education now a big budget "ticket," the administration enlarged the U.S. Office of Education and named noted educational leaders to important posts: John Gardner, formerly Carnegie Foundation president, as Secretary of the Health, Education, and Welfare Department; Francis

* FROM *The PTA Magazine*, February, 1966, p. 13. Reprinted by permission of The PTA Magazine.

Keppel, moved up from Commissioner of Education to Assistant Secretary for Education; and Harold Howe II, leader in North Carolina's education revival, as U.S. Commissioner of Education.

8. *National "assessment."* The Civil Rights Act of 1964 requires the federal government to determine whether minority-group children are getting equal opportunities through the new education legislation. So the U.S. Office of Education is arranging to test—or "assess," as it is officially called—one million children. Some major cities refuse to participate on the ground that such testing is an invasion of local control.

9. *Integration.* Heeding the new Civil Rights Act, school systems in all sections moved toward wider integration of ethnic groups. In the South some 217,000 Negro children entered schools previously all white. This triples last year's integration record.

10. *Teacher militancy.* Strikes and threats of strikes, sanctions, and demands for recognition as negotiation agents marked the year. Teachers acting under the competing banners of the NEA (National Education Association) and the AFT (American Federation of Teachers) sought and got official recognition as agents to bargain with boards of education on wages and working conditions. In Utah and Oklahoma, organized teachers, aided by the NEA, won battles for more funds for education.

Federally Financed Programs

Elementary and Secondary Education Act of 1965

The basic aim of the Elementary and Secondary Education Act is to equalize educational opportunities and assure that every child in the United States can develop to his or her inherent mental capacity. Each title of the act is described in the following selection by Albert L. Alford.

THE ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965—WHAT TO ANTICIPATE *

Albert L. Alford

Outside the one-room schoolhouse he attended as a boy, President Johnson signed into law on April 11, 1965, the first broad federal aid bill for

* FROM *Phi Delta Kappan*, June, 1965, pp. 483-88. Reprinted by permission of *Phi Delta Kappan*.

elementary and secondary education in this nation's history. This action culminated almost 100 years of efforts to get supporting legislation for elementary and secondary schools through both houses of Congress.

Contrary to some reports, this legislation does not supply general support of the type reflected in most state foundation programs nor is it an equalization bill in the ordinary sense. Its coverage, however, is broad—some 90 per cent of the school districts in the country should qualify under Title I alone, and depending upon the application of the other titles, it is probable that all operating school districts will benefit in one way or another.

The basic aim of this legislation is to equalize educational opportunities and assure that every child can develop to his or her inherent mental capacity. While the bulk of funds (over \$1 billion out of approximately \$1.3 billion) will be devoted to the special needs of educationally deprived children from low-income families, many benefits will accrue directly to the education of all children through improved textbook and library resources, supplemental services, new techniques, and knowledge resulting from enhanced research activities and improved educational leadership.

Since this act is actually an omnibus approach to the support of elementary and secondary education, it is necessary to discuss each title separately, though there are interrelationships. These will be covered at the conclusion of this article. The purpose of this presentation is to emphasize those things which *school administrators can be doing in advance of the availability of funds* for programs to be supported by the act. At the time of this writing—the act has just been signed—the Office of Education has only begun the task of drawing up the regulations and other materials necessary to implement the legislation. Every effort is being made to speed the process so that maximum benefits may be obtained from the legislation during the 1965–66 school year, but school administrators know that the first year of operations under new legislation is never easy. Since the real responsibility for planning and action under this legislation rests with the local and state educational agencies, it is important that at least preliminary thought be given now to the opportunities ahead. Appropriations measures remain to be passed by the Congress, and we will not know the full impact of the law until this is done.

While I wish to be as candid as possible in the discussion of this legislation, it must be emphasized that these statements do not represent official policy and are subject to modification by the issuance of regulations, guidelines, and procedures. The legislative history plays an extremely important role in the interpretation of this legislation. This history is rather massive, in spite of the relatively short period between introduction and passage—just one day short of three months.

Let us now examine each title of Public Law 89-10, the official designa-

tion for this act. No attempt will be made to review all details of the legislation, and it is assumed that those reading this article are generally familiar with its provisions. We shall concentrate on the immediate tasks facing school leaders.

TITLE I—FINANCIAL ASSISTANCE TO LOCAL EDUCATIONAL AGENCIES FOR THE EDUCATION OF CHILDREN OF LOW-INCOME FAMILIES

For those who will be reading the actual legislation and working with it, it needs to be emphasized that Title I of Public Law 89-10 becomes Title II of Public Law 81-874. Title I of Public Law 874 provides federal financial assistance to school districts affected by federal activities. Since Title I of P.L. 89-10 is an amendment to P.L. 874, it is important to refer to the full text of P.L. 874, as amended, since the definitions in that act apply to Title I (not the definitions included in Title VI of P.L. 89-10). Both the House of Representatives Committee on Education and Labor Report No. 143 and the Senate Committee on Labor and Public Welfare Report No. 146 contain the full texts of P.L. 874 as amended. These are the reports which accompanied H.R. 2362, the bill which became P.L. 89-10. Both reports are valuable for purposes of interpreting the legislative intent of the Congress for all titles of the act.

The Purpose

Title I involves the bulk of the money, approximately five-sixths, and it is this title which received most of the attention in committee and on the floor of the House of Representatives and the Senate. There has been some misunderstanding of the purpose of this title in spite of the extensive hearings, floor debate, and press commentary. Part of the misunderstanding has arisen from too much concentration on the things which the funds can buy or support, rather than the purpose which must be achieved by the expenditures.

While it is true that the money under this title can be used for teachers' salaries, for school construction, for textbooks, and for varieties of curriculum aids and equipment, *these items must be a part of a special program focused on the particular educational needs of the children of poverty.* In some cases, and this will certainly be a minority of school districts in this country, a school district may have such a high proportion of poor children that the only practical approach to meeting their needs will be a general upgrading of the whole educational program of that district. Nevertheless, however, that even in these cases the focus of attention remains on the educational deprivation resulting from poverty.

Local Eligibility for Funds

Since the responsibility for planning and action falls upon the local public educational agency, what can administrators at that level do to get the process of establishing programs under way prior to the actual issuance of regulations and official guidelines? Some will say, "How can we get started if we don't even know how much money we will get?" The answer to this is that there is much to be done even in the absence of firm dollar figures.

If local administrators persist, it is possible to make some *rough estimates* of the amount of money for which a local agency may be entitled to apply, but this will be dependent upon the ability of the local staff to obtain poverty data which applies to the whole county as well as to their school district. In metropolitan areas where census tracts are published, rough ratios of low-income families in the district to those in the county as a whole could be established.

If arrangements with the county welfare agency can be established, it may be possible for that agency to provide some indication of the proportions of the total county AFDC load attributable to each school district. This data would probably have to be developed by the county welfare agency in each case, so administrative difficulties could arise. There may have been surveys of poverty carried out by other organizations which would give rough ideas of the proportion of the county total any school district might be allotted. Preliminary estimates of the county allocations are available in a Senate Committee print of the Subcommittee on Education entitled "Elementary and Secondary Act of 1965" and dated January 26, 1965. It cannot be emphasized too strongly, however, that these are *estimates*—the actual allocation will not conform exactly, and there may be some wide variations.

Educational Needs of Low-Income Children

Rather than worry about how much money a district is going to receive at this point, however, it would be better to concentrate on a determination of the needs of the children of low-income families in the school district. Most superintendents of school districts, unless they are very new, probably know in rough terms where the low-income children are attending school and where they reside. If this information is not available, it can probably be developed rather quickly by talking to key persons familiar with the school clientele.

Under the law, school children from low-income families attending private schools must also be provided services in proportion to their numbers. Programs to include them will involve the establishment of a liaison between the administrators of the public and private schools if it does not

already exist. By the very nature of many private schools, the proportion of poor children in them will be smaller than in the public schools, but there may be substantial numbers in central city districts and some rural districts.

Objective Measures

Once the school attendance areas of high concentration of poor children have been located, the next step would be to establish some objective measures of educational deprivation. Are there test results or other criteria which can give a measurable indication of the educational deficiencies of these low-income children? Standard achievement tests usually show a high correlation between low-level performance and low income. As the reverse to this, performance on certain tests may also lead to the location of low-income children. School dropout rates tend to follow a similar pattern.

The importance of establishing objective measures of educational deprivation lies primarily in the relation of such deprivation to the programs which will be established for its removal. These programs must be focused on pupil need, and the law directs that evaluations and reports of progress in meeting the need be made at least annually. This type of evaluation in itself is a tremendous educational innovation and will require careful thought and consideration by those charged with the administration of the programs. If progress is to be measured, then a clear baseline must be established; evaluative data must be recorded from the very beginning of the programs.

Types of Programs

Once the needs are established, it becomes necessary to design and propose a specific program or programs. Under this title, the range of such programs is limited only by the imagination. They may include preschool programs; all types of subject-matter remedial programs; cultural enrichment programs; health and nutrition services; summer, after-school, or weekend classes; and special programs for dropouts, to mention a few—so long as they are concentrated on the children of low-income families.

Low-Income Child Not Labeled

While the focus of this title is on children of poverty, it has never been intended that individual children be identified as participating in a welfare program or coming from a family of less than the low-income factor—\$2,000 for the first year. These measures are used to identify statistically the geographic concentrations of poverty and to allocate money; but once a program is approved by the state educational agency for a school attendance area, all children in that area having the particular educational

deficiency may participate in the special program. This may also mean that some low-income children will not benefit directly from Title I if they are not in an area of high concentration. There would seem to be no alternative to this, however, unless the legislation were to support a general remedial program—not the intent—or children were individually labeled as poor. The negative results of the latter procedure might offset most of the benefits of the title.

Nonpublic-School Children

In the design of the special program or programs it is necessary to consider eligible private- as well as public-school children. If there are such private-school children in the areas being served by special programs, then provision must be made to extend benefits in proportion to their number. Recognizing that state constitutional and legal provisions may preclude certain types of arrangements, the law gives complete leeway as to the types of programs that may be set up. Certain examples—specifically dual enrollment, television, radio, and mobile educational services—are included, but these are only illustrative. Any others can be used so long as they extend proportional benefits and are, in fact, usable by the private-school children. The number of nonpublic-school children from low-income families must also be considered in determining areas of concentration.

Community Action Programs

As a final but important item, school administrators should note that cooperation with the agency responsible for a local Community Action Project under the Economic Opportunity Act, if one exists, is necessary in the development of programs for Title I. Some eighty-three community action programs have been approved at this writing, and the number will increase rapidly. A vast majority of these programs, seventy-two out of eighty-three, have what is known as an educational component. Many local school officials will already have become involved to some extent in the planning of community action programs, but for those who haven't, it would be well to investigate whether such programs exist or are being planned within their school districts.

If such programs exist or are being planned, then liaison between the local school officials and the directors of such programs is essential. There is much for both Title I of the Elementary and Secondary Education Act and the Economic Opportunity Act to accomplish. While it is difficult to duplicate educational programs, since a child can only be in one place at a time, and while most persons would agree that it is difficult to give too many educational benefits, the Congress wanted to be assured that two federal programs were not doing the same things. Careful planning and

the full use of current resources is certainly necessary if maximum benefit is to be achieved from available funds. Local public-school officials will, however, be responsible for Title I programs. No veto power is given to either agency over the other.

Summary

In summary, there are many preliminary tasks which can be started by local school officials in order to speed implementation of Title I. These include location of the attendance areas of high concentration of pupils from low-income families, developing measures of educational deprivation in these areas, thinking at least in tentative terms of the types of programs which might meet the needs of pupils indicated by these measures, giving special thought to ways of including needy private-school children in these benefits, and developing liaison both with private-school and community action program officials if it does not already exist. If this preliminary planning results in programs calling for more money than is ultimately allotted, the size of the programs can usually be reduced. At least officials will be ready to make full use of the available funds. Further, with the increased money available in subsequent years through the special incentive fund, even if the basic grants are not increased, full utility can ultimately be expected for all such planning.

TITLE II—SCHOOL LIBRARY RESOURCES, TEXTBOOKS, AND OTHER INSTRUCTIONAL MATERIALS

The major role under Title II will probably accrue to the state educational agencies. Each state must designate an agency to handle the distribution of resources under this title, and it is expected that in virtually all cases this will be the state educational agency. Since nonpublic as well as public school children must receive benefits under this title, state constitutional provisions may, in a few cases, dictate involvement of other state agencies and as a final alternative the United States Commissioner of Education. It is expected that each state will be able to make some provision for full administration.

While the state may play the major role, there are many facets of this title which should involve the early consideration of local school officials. It is the local educational agency which will have to put these materials into use.

Under the state plan, each state will determine the type of resources to acquire and the relative need of the children and teachers of the state for such resources. In both areas the local educational agency has a vital interest.

Resource Allocation

While \$100 million will not meet all the resource and media needs of the schools, it can have a substantial impact. There is, however, a problem as to how the available funds will be utilized in a state—for textbooks, library books and periodicals, audio-visual materials, or other instructional material. Local educational authorities will certainly want to be ready to express their views as to the type of materials which the state plan will provide or the proportions of each type. Most state agencies will probably consult with local officials before the state plan is submitted to the U.S. Commissioner of Education for approval, but the process can be speeded if local officials have considered these matters in advance.

Relative Need

The local educational agency also has a concern with the relative need of children and teachers for these materials. Since the federal funds under this title are not to be used to supplant state, local, or private-school funds devoted to the same purposes, the expenditures must be for materials which are currently financed by the children, or by parents and teachers, or which have not been available because of lack of funds. This will mean, for example, that in some areas where free textbooks are currently furnished the major need will be in library resources, while in other areas textbooks will be emphasized. In many areas all of the resources may be needed, but priorities will have to be established, since all needs will not be met during this first year.

The thought which local school officials give to this title now and the influence they have upon the state plan will have a sharp effect upon how adequately their needs are met from the available funds.

TITLE III—SUPPLEMENTAL EDUCATIONAL CENTERS AND SERVICES

A local public educational agency or combination of such agencies is the prime agent under this title, as under Title I. However, in planning, establishing, and carrying out programs under this title, participation is required of persons broadly representative of the cultural and educational resources of the area to be served. This is a matter which can involve preliminary thought on the part of local school officials, since it will involve additional liaison.

There is another point related to the purposes of this paper which can be made: Funds allocated under Title III for fiscal year 1966 are available for expenditure in fiscal year 1967. This means that time pressure is to

some extent removed, and there is opportunity for unhurried planning.

Applications under this title will be approved by the United States Commissioner of Education, but there will be state educational agency review and recommendations. Grants can be for a wide variety of purposes: to provide new services, enrich existing programs, or establish exemplary elementary and secondary school programs. Basically, this title is designed to bring educational innovation into the school system and to tap the community's artistic and cultural resources for the enrichment of school programs.

Not all local educational agencies will be involved in this title in the first year because of limited funds. Since approval of applications will be on a competitive basis within each state, it would be wise for local administrators to prepare the best proposal possible even if extra time is needed. It would seem to be quite appropriate to wait until official information is issued before solidifying plans.

TITLE IV—EDUCATIONAL RESEARCH AND TRAINING

This title amends the Cooperative Research Act of 1954 by providing \$100,000,000 over five years for the construction of national and regional research facilities, broadening the clientele who may participate in the programs, providing grants in addition to contract authority, authorizing dissemination of information derived from educational research, and establishing a new program for training in research. Dr. Francis A. J. Ianni discusses these programs more fully in another article in this issue.

TITLE V—GRANTS TO STRENGTHEN STATE DEPARTMENTS OF EDUCATION

State educational agencies will be strengthened under this title by providing money which can be used for a wide variety of purposes, including educational planning on a state-wide basis, collection and dissemination of educational data and information, educational research and demonstration projects, improving quality of teacher preparation, developing state-wide measures of pupil educational attainment and training, and providing consultative services to local educational agencies.

Although specific counsel cannot be provided relative to the steps local personnel may want to take at this time, many local administrators may desire to contact their chief state officers to recommend that long-needed services be provided or expanded under the state application. The local administrator will ultimately benefit from all provisions of the application. Every effort is being made to get this title into operation as soon as appropriations will permit, so that the strengthening of the state departments

can begin where necessary by acquiring the personnel and competencies which will be required in their role under the other titles, particularly Titles I and II. Assistance by the state to local educational agencies for the plans required under Title I could also be extremely important.

Certainly the states can and should begin to plan for the types of personnel needed and programs which they would hope to initiate under these funds. There will be administrative funds available under Titles I and II also, but they may not be received as quickly. Title V can therefore be used as a way to get the other programs started under the educational planning authority and within the terms of the application. This may be particularly important for the smaller departments.

The new programs initiated under all titles of this legislation place an additional responsibility upon state educational agencies. Even prior to this legislation, over half of state department personnel were employed in federally subsidized programs—over 90 per cent in one state. Perhaps too frequently the state department has done well to simply keep up or follow the programs. Certainly in too few cases have there been resources available to allow for an effective leadership role. Medium-range planning of the educational needs of the state is a minimum requirement for such leadership. It should now be possible under a full implementation of Title V for the state department to provide an overview of educational needs and to provide guidance and support to the local educational agencies in the state.

INTERRELATIONSHIP OF PROGRAMS UNDER THIS ACT

Each title of this act has been considered separately, but by so doing there has been no intention of implying that they will be isolated in application. We have already seen that Title V funds may supply a needed early resource to state educational agencies in their efforts to plan for the implementation of the other titles, including support of local educational agencies in their planning role. Further interrelationships exist.

Only Title I is devoted exclusively to meeting the special educational needs of educationally deprived children from low-income families, but programs and support for meeting the needs of this group can come from the other titles as well, if the state and local educational agencies decide to take this approach. Without any special or deliberate orientation in this direction, however, the textbook and library resource support under Title II will extend aid to the educationally deprived. Many of the research projects under Title IV and the special services under Title III will be focused upon the needs of the educationally deprived, since this can hardly be ignored as a major educational need.

In general terms, it is intended that many of the findings of research

sponsored under Title IV as well as the completed Cooperative Research Program projects will find application in the exemplary programs and supplementary services of Title III. These ideas should also find their way, ultimately, into the resource materials supported under Title II.

Because of the strong role played by the state and local educational agencies in Titles I, II, III, and V, there is a tremendous opportunity to make a highly coordinated multifaceted approach to the educational needs of our local communities. Each of the titles allows wide flexibility in approach to the broad problem it spotlights. This latitude of choice for the local educational agency should provide the opportunity for building an educational program to meet its particular problems. We should never lose sight of the fact that the total thrust of this legislation is "to strengthen and improve educational quality and educational opportunities in the nation's elementary and secondary schools."

SUCCESS DEPENDENT UPON LEADERSHIP

While running the risk of being redundant, I must make it abundantly clear that the success of the major portion of this legislation is dependent upon the response of state and local educational leaders.

This legislation may not take the place of broad general support, but it does make a significant beginning toward meeting some, if not most, of the serious educational problems facing this nation today. Its basic approach can be described as correcting the worst situations first. Recognizing that the "worst" situations will vary from community to community, extensive local initiative has been intentionally provided at virtually every point throughout the legislation. This approach represents a high degree of confidence and faith that local and state educational officials will apply their best efforts to the successful implementation of the legislation. *Let no one assume that the task will be easy.* The problems to be dealt with are difficult and long-standing, but their amelioration or solution will mean new hope and opportunity to this and future generations of American children. This new venture in a fuller local, state, and federal partnership, organized to meet the problems of education, promises to provide a sense of satisfaction and accomplishment to all who participate in the effort.

National Foundation on the Arts and Humanities

The National Defense Education Act (NDEA) is well known to school administrators. More recent and less well known is the National Foundation on the Arts and Humanities Act of 1965. The purpose of the latter is to

can begin where necessary by acquiring the personnel and competencies which will be required in their role under the other titles, particularly Titles I and II. Assistance by the state to local educational agencies for the plans required under Title I could also be extremely important.

Certainly the states can and should begin to plan for the types of personnel needed and programs which they would hope to initiate under these funds. There will be administrative funds available under Titles I and II also, but they may not be received as quickly. Title V can therefore be used as a way to get the other programs started under the educational planning authority and within the terms of the application. This may be particularly important for the smaller departments.

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In general terms, it is intended that many of the findings of research

- grades 9-12, Oregon, Washington, Idaho, Montana, Alaska, Hawaii; July 9-Aug. 5; Roland Bartel and Charles R. Keller, co-directors.
- *Memphis Academy of Arts*, Memphis, Tenn.: arts and the humanities; for 25 teachers, grades 1-6, mid-South; June 13-July 12; Nadine Parker, director.
- *U. of Texas*, Austin: music and humanities; for 30 teachers, grades 7-12, Texas, Oklahoma, Louisiana, Arkansas; June 20-July 29; Barbara Rogers, director.
- *U. of Vermont*, Burlington: humanities (art and literature); for 60 teachers, grades 9-12, open area; July 11-Aug. 6; Ippocrates Pappoutsakis, director.
- *Wisconsin State U.*, River Falls: theater; for 35 teachers, grades 9-12, open area; June 13-Aug. 6; John A. Oostendorp, director.

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strengthen the teaching of arts and humanities in the nation's schools. Education U.S.A.'s "Washington Monitor" summarizes the purpose of the act and names the institutions that had the first programs approved and paid for by the U.S. Office of Education.

MONEY FOR THE MUSES *

Editors of Education U.S.A.

The first institutes under the National Foundation on the Arts and Humanities Act of 1965 have been announced for next summer by the U.S. Office of Education. They will give 431 teachers a chance to brush up on music, films, Latin, theater, art, and arts and literature. Under the \$500,000 program to strengthen the teaching of the arts and humanities in the nation's public and private nonprofit elementary and secondary schools, USOE will pay the entire cost of institutes at 11 colleges and universities. Participants will pay no tuition and will receive a weekly stipend of \$75 plus a \$15 weekly allowance for each dependent. Deadline for applications to be received by the schools is April 14. Full information can be obtained from the institute directors:

- *U. of Southern California*, Los Angeles: music; for 40 teachers, grades 7-12, southern California area; Aug. 8-Sept. 3; Robert Choate, director.
- *U. of Iowa*, Iowa City: music; for 36 teachers, grades 6-12, Iowa and open area; June 14-Aug. 10; Neal E. Glenn, director.
- *Mt. St. Scholastica College*, Atchison, Kans.: film appreciation; for 40 teachers, grades 9-12, open area; June 8-21; Sister Bede Sullivan, director.
- *Bemidji State College*, Bemidji, Minn.: humanities (interdisciplinary); for 40 teachers, grades 4-6, northern Minnesota, Wisconsin, eastern North Dakota; June 13-July 29; K. E. Henriques, director.
- *U. of Minnesota*, Minneapolis: Latin; for 40 teachers, grades 5-8, open area; July 12-Aug. 20; Robert P. Sonkowsky, director.
- *Ohio State U.*, Columbus: art appreciation; for 35 teachers, grades 7-12, open area; July 18-Aug. 26; David W. Ecker, director.
- *U. of Oregon*, Eugene: humanities (interdisciplinary); for 50 teachers,

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Postlogue: Look Ahead—Not Back

Glen F. Ovard

The door is just beginning to open on the greatest and most challenging period of educational history. The revolutionary changes that have been occurring in our society are now being reflected in our schools. Researchers have found that schools have problems and need help. The federal government is giving vast sums of money to improve inadequate program areas. Business is teaming with education to combine experience in media and technology with educational innovation and design. Schools are reorganizing, ungrading, and developing continuous progress programs. Team teaching, individualized instruction, self-learning packages, and approaches to inquiry and creativity are being introduced. Computers are beginning to pave the way for the management and clerical relief that principals and teachers have sought for years. Television, video-tape, and instant play-back offer new ways to provide individual instruction as well as effective large-group instruction. More complex programs and attention to individual

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- ROACH, STEPHEN F. "What the Federal Courts Say About Racial Imbalance in Northern School Systems," *Bulletin of the National Association Secondary-School Principals* (December, 1965), pp. 41-55.
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